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NATIONAL ASSOCIATION  
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COST ACCOUNTANTS  
YEAR BOOK  
1936

PROCEEDINGS OF THE  
SEVENTEENTH INTERNATIONAL COST CONFERENCE

Netherland Plaza Hotel  
Cincinnati, Ohio  
June 22, 23, 24, 25, 1936



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SESSION I

THE INFLUENCE OF RECENT FEDERAL LEGISLATION ON INDUSTRIAL MANAGEMENT AND ACCOUNTING

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TUESDAY MORNING, JUNE 23, 1936

LOGAN MONROE, Assistant Treasurer, Eaton Manufacturing Company, Cleveland, Ohio, *Chairman*

Presiding Officer at all sessions, President GRANT R. LOHNES,  
Treasurer, National Cash Register Company, Dayton, Ohio

PROGRAM COMMITTEE

F. EARL REUWER, Controller, Emerson Drug Company,  
Baltimore, Md., *Chairman*

LOGAN MONROE, Assistant Treasurer, Eaton Manufacturing  
Company, Cleveland, Ohio

M. B. WALSH, Partner, Walsh and Company,  
Detroit, Mich.

C. A. PACKARD, Controller, Worthington Pump and Machinery  
Corporation, Harrison, N. J.

THOMAS H. SANDERS is an Englishman by birth and a graduate of the Department of Commerce of the University of Birmingham. After five years of business, he began his teaching career in 1910 at a commercial college of the Japanese Government. In 1918 he joined the faculty of the University of Minnesota, going two years later to Harvard University where he received his Ph.D. degree and has since continued as a member of the faculty. He is at present Professor of Accounting in the Harvard Graduate School of Business Administration. During 1935 Dr. Sanders was associated with the Securities and Exchange Commission at Washington as consultant on financial reports required by the Commission. He is the author of several articles and books on accounting, his latest contribution being *Cost Accounting for Control* published in 1934. Dr. Sanders has contributed to the National Association in many capacities, and was National President during the year 1931-32.

ERIC A. CAMMAN was born in Cincinnati, Ohio, received his high school training at Curtis High School, Staten Island, and his higher education from Columbia University night sessions. His broad practical experience was obtained in contact with the following positions: Secretary-Treasurer of the Lehigh Coke Company; private secretary to Edward Dean Adams, banker; junior partner of G. Charter Harrison & Co.; cost installation man with Scovell, Wellington & Co.; Assistant Controller and later Assistant Treasurer of J. H. Williams & Co.; in charge of Systems Department and later Partner, Peat, Marwick, Mitchell & Co. Mr. Camman was a charter member of the National Association of Cost Accountants and has served the Association in many capacities for a number of years. In 1927-28 he was President of the New York Chapter. Elected to the National Board in 1930, he served as Director in Charge of Research for the years 1930-31 and 1931-32 and as Director in Charge of Chapters for 1932-33 and 1933-34. He served as Vice-President in 1933-34, and as President in 1934-35. In addition to his affiliation with our Association, Mr. Camman is a member of the American Institute of Accountants, the New York Society of Certified Public Accountants, and the New Jersey Society of Certified Public Accountants. He is the author of several articles on cost accounting subjects and of *Basic Standard Costs* published by the American Institute Publishing Company in 1932.

# THE INFLUENCE OF RECENT FEDERAL LEGISLATION ON INDUSTRIAL MANAGEMENT AND ACCOUNTING

The opening session of the Seventeenth International Cost Conference of the National Association of Cost Accountants was called to order in the Hall of Mirrors at the Netherland Plaza Hotel, Cincinnati, Ohio, at nine-thirty o'clock, on Tuesday morning, June 23, 1936, by Grant R. Lohnes, the National President.

PRESIDENT LOHNES: It is my duty and privilege to declare this, our Seventeenth Annual Conference, in session.

In reviewing our programs for the past few years, we find that the National Recovery Act and other federal governmental regulations have occupied very important positions. The reason these have seemed of great importance to us is because of their effect on the cost of production. This is not a political organization in any sense whatever. But, inasmuch as it is our responsibility to record and disclose causes and results, we are compelled to discuss these regulations, and endeavor to find solutions to the problems created.

I recall that two years ago at our conference in Cleveland we were discussing the National Recovery Act, and then in Boston last year this same subject was given further consideration. During the past year this Act, together with certain other New Deal regulations, have been declared unconstitutional by the Supreme Court.

Our concern as cost accountants was not in the constitutionality of these laws; we were concerned with their influence on the cost of our products. Too often, I believe, we are inclined to gather the opinion that business is conducted for the purpose of exchanging dollars, instead of the purpose of supplying to man the things which he needs to give him life, comforts and conveniences at the lowest possible cost.

We have been concerned so many years with the problem of producing and distributing at a low cost that we are inclined to be critical of regulations which interfere with these trends. But let me repeat that it is not the purpose of our organization to criticize these laws, but rather to serve industry by assisting in finding solutions to the problems which are created by such laws.

We have had this past year some experience with the Social Security Act. We have not as yet fully realized the effect of this Act because it is going into effect gradually. We have, however, been concerned with the records and reports which have been made necessary. We have been compelled to endeavor to interpret the various laws which have been enacted as this Act has been put into effect throughout the country.

Social security has been one of the problems of mankind since the beginning of man. The United States is, I understand, the nineteenth country which has attempted to enact laws which will provide this long-sought security. It is hoped that this Act in the United States will prove to be a step in that direction.

For two years we have been confronted with the problem of meeting the requirements of the Securities Exchange Commission. We all feel, I am sure, that some form of regulation was necessary, and it is hoped that this Act will prove successful and that it will not prove too great a burden on industry.

Our Program Committee has arranged a program for this Conference which has as its keynote the cost problems of today. And at this point it gives me great pleasure to turn the Chair over to the Chairman of this Committee, Mr. F. Earl Reuwer, Controller of Emerson Drug Company, of Baltimore, Md. Mr. Reuwer.

CHAIRMAN REUWER: Thank you, President Lohnes. I believe this is the proper morning for a good keynote speech such as you have just heard.

Early in the deliberations of your Program Committee it became manifest that the subjects discussed at this convention should represent a return to the fundamental issues involved in the daily experience of our members. Accordingly you will hear discussed such subjects as "Accounting for Capital Assets and Depreciation," "Present-Day Problems in Inventory Valuation and Control," "The Budgetary Method of Controlling Distribution Costs," "Internal Audit and Control," "Treatment of Fixed Overhead Expenses in Costs and Inventories," "Treatment of Costs of Materials into Process."

We cannot entirely ignore, however, the new problems which have been presented to us by recent legislation. Consequently our first day's sessions will be devoted to a consideration of these problems as a guide to our future thinking. Today's sessions have been organized by that consistent supporter and National Director of N. A. C.

A., Mr. Logan Monroe, Assistant Treasurer of the Eaton Manufacturing Company, Cleveland, Ohio.

CHAIRMAN MONROE: Our convention technique has progressed quite a lot since our first conventions in 1920 and 1921. In those days the burden of coordinating the sessions fell principally upon the President. A few years later, we decided to have a general chairman of the technical sessions, and he presided at all meetings. They have made it easier for us now, and we have a daily chairman whose principal function is to introduce the speakers.

Today's program has, as Mr. Reuwer has told you, been built around recent federal regulation of industry. Most of our subjects during the week will be confined to fundamentals, but this morning we are going to have two talks which will deal to some extent with the social and economic effects of legislation and regulation.

During the past few years we have had a great deal of legislation affecting us directly, and affecting our businesses. It has affected our entire social setup a great deal more than the average layman realizes today, particularly the Social Security Act, the full effects of which we will not feel for many years to come.

Our first speaker this morning is a man who has been active in our Association for years, and it will be superfluous for me to attempt to make many complimentary remarks about him. He is a Past National President and is the author of quite a few articles and books on accounting and related subjects. He is a Professor of Accounting in the Harvard Graduate School of Business Administration. It gives me great pleasure to present to you, Professor Thomas H. Sanders, who will talk to you on "The Influence of Recent Federal Regulation on Industrial Management and Accounting." Professor Sanders.

### THE INFLUENCE OF RECENT FEDERAL REGULATION ON INDUSTRIAL MANAGEMENT AND ACCOUNTING

THOMAS H. SANDERS

Professor of Accounting, Graduate School of Business Administration,  
Harvard University, Boston, Mass

**I** COUNT it a great opportunity to appear before you this morning as the opening speaker. It has always been the custom at these conventions in the first session to sketch a broad background to

describe the conditions in which we as accountants and cost accountants must function. That, I take it, is what I am expected to do this morning. In other words, I am expected to ask, and to endeavor to answer, the question, "What is the meaning of our times for us?"

The meaning is, I believe, that which has already been expressed by President Lohnes when he spoke of the responsibilities of business; what is going on today is that the responsibilities of business to our people, to our society, are being stressed more than ever before.

### *Responsibilities of Business to Society*

Now when I use expressions like "the responsibilities of business to our society," I am anxious not to be misunderstood. As a member of the academic profession, I find myself somewhat suspect. It is expected that when a professor gets up in public to talk nowadays he will say something foolish and, if he begins to talk about the duties of business to society, it is assumed to be certain that he is going to say something very foolish.

I want to avoid that and to make it very clear that in my judgment American business has already served our society well, and will continue to do so. Furthermore, these present times, which seem so full of unrest and dissatisfaction, are not worse than the times which have gone before; they are much better in many ways, and the faithful student of history will recognize that fact.

But what is going on is that we have a democracy—I use the word in its general sense—we have here a democracy becoming more and more conscious of its power, and more and more insistent upon its rights and its intentions to enjoy the good things of life. That is all to the good. We should welcome that kind of thing, but we should not allow these conditions to mislead us, and I repeat that conditions are not worse than they have been; they are better than they have been, and are going to be still better. And for those facts we have to thank the American business man. When the Congress in Washington passes a Social Security Act, or a Securities Exchange Act, or other acts of that kind, to give effect to the wishes of our people, that is all very well; but those things are made really possible only by the efforts and accomplishments of American business men.

President Lohnes has stressed another thing which ought to be in the foreground of our deliberations, and that is that we are not a political association. These are times of great heat and excitement, but it is our duty to speak the words of sobriety and sincerity, to

speak as near the truth as we can, not to add to the heat of the occasion, but rather to the light of our times.

### *The Regulation of Business in the Middle Ages*

In this duty of describing the background of business in which we must function, it is well to take the opportunity to refer further to a historical approach to this question. I was brought up by professors who believed in the historical approach, and still hold that it is necessary to include that point of view if we are fully to understand the things of which we speak.

In particular, I want to refer to the fact that in the Middle Ages all society, all business society, and all other activities were regulated down to the last extremity, every action, every movement, of everybody in every little town was subject to rule and regulation, and the penalties and punishments were very severe. But by a long series of events, associated chiefly with two great things, namely, the growth of modern science and the growth of democratic government, those restrictions of the Middle Ages were swept away. In that great movement, the Reformation, the Renaissance, the American Revolution, and the French Revolution were incidents; they were simply the highlights in a grand general movement which was calculated and designed to set people freer to enjoy the fruits of science and the fruits of better government which men foresaw would surely come. The culmination of that movement has been seen in part in our American Republic, and in part it has been seen in England. Mr. Gladstone was in large measure the embodiment of the movement, and it might be said that the full flower of the liberal spirit was represented in his person. It is a somewhat strange thing to reflect that Lord Macaulay wrote an essay on Gladstone in the year 1839, nearly a hundred years ago, and yet I can remember Gladstone; I can remember the end of his life, and his death in 1898. During a large part of the nineteenth century, therefore, Gladstone was engaged in England in sweeping away the last relics of the restrictions which were imposed upon those people in the Middle Ages.

### *The Growth of New Types of Restrictions*

But when I went to school in the early part of this century, a very wise professor made the remark that, having thus removed all the restrictions of the Middle Ages, it began to appear that a new type of restriction, on a larger scale, with larger political units, was growing up, that apparently we were going to reconstruct and rebuild

those restrictions, and have more government than we had had during the nineteenth century. You will agree with me that that prophecy has been abundantly fulfilled both in England and in this country.

I bring in those few remarks, because it is wise and well for us to see these movements going on over the centuries, and we ought to be better able to judge what is going on in our own time if we can see the long-range trends. It would seem that all men who visualize this historical evolution, from a time when all things were regulated to a time of minimum regulation, would wish to go slowly and cautiously in the matter of reconstructing that restriction period and adding to the restraints on individuals as well as to the burdens of business.

### *The Cost Problem Always Present*

We all recognize that some of the enactments which have recently taken place are necessary. If they do not work, we cannot abolish them entirely; we must merely substitute better ones in their place. But in all these things the cost problem is present; the ever-present question is whether they yield greater benefits than they cost. That is true of the Social Security Act; it is true of the Securities Exchange Act, and of all recent enactments. We therefore ought to be competent to have some judgment on those questions, and accountants have, in fact, rendered considerable service already by giving testimony in Washington, by giving advice to Congressional committees and in private hearings of one sort or another; and indeed that is one of the great problems of our time, to develop measures which will serve the wishes of the people, which will accomplish their purposes, but which will do so at the least cost.

That kind of thing is very well illustrated in another movement which has taken place in an adjacent activity, namely, the activities of auditing. You all know that in years gone by a detailed audit, accomplished by detailed checking, was the common practice. Now we have the verification of financial statements taking its place, reducing greatly the volume of work and endeavoring to secure the advantages of sound financial statements without all that labor and effort.

I hope that it will not be out of place or sound ungracious if I express the opinion that we would have been still better off if the attitudes and the processes of accounting and cost finding could have

been more applied to the measures which have been passed, the attitude of fact-finding and cost consideration, rather than the attitude which sometimes characterizes our legal brethren, the tendency to impose restrictions without thinking sufficiently of the relative costs and the benefits to be derived. On many occasions lawyers have had too much to say in these matters, and accountants somewhat too little. That may be partly our own fault in that we have not made ourselves more articulate, and it is part of our duty that we should in these times express ourselves whenever we feel able to measure the relative benefits derived from these proposals and the costs which they involve.

### *Accounting Is Responsibility*

I started out by emphasizing the responsibilities of business. It is unnecessary to say here that accounting is responsibility. We have those famous words of Holy Scripture, "Give an account of thy stewardship; for thou mayest be no longer steward." That is the accountant's duty everywhere, to give an account of stewardship, an account of the management to all whom it may concern. And the first element in that duty, of course, the first necessity, is that that account shall be a true, a clear, and a faithful account.

To whom are these responsibilities held? They are held to customers, to employees, to stockholders, and to the government. You may be able to think up other groups, but these will suffice for this morning. The responsibilities of business to employees will shortly be dealt with more fully by Mr. Camman. But it may here be said that the first interest of employees is in regular and steady employment at a decent wage. There, again, is something which only able management can provide. The government cannot provide regular employment at a decent wage. Only effective and able management can do that, and management which is informed and directed in its efforts by clear and sound and reliable information on its own operations.

The responsibilities of business to customers have not been quite so evident in the recent movements as the other responsibilities which have been mentioned. Apparently it is felt, and I think rightly so, that the movements of competition under our competitive system go a long way to take care of customers. No new inventions last very long without reaching down to a better article supplied to the customer at a better price.

*Overhead Rates and Decreasing Costs*

But here I would like to say a few words upon a subject which has been discussed a great deal in these conventions and in our chapter meetings. We are all acquainted with the idea that overhead, a normal amount of overhead, should be absorbed by a normal volume of business, and we have felt it essential in the interests of a healthy business that this should be carefully worked out; probably everybody here agrees with that general position. But it is possible that the conservative instincts of accountants may sometimes lead us a little to one side in that question. In other words, the progress of science and invention, the development of labor-saving devices, will necessarily and inevitably result in lower and lower costs of production, and we are all familiar with that fact, too.

Now it seems to be agreed by most economists of standing that this particular situation calls for passing on those economies to customers in the shape of lower prices as fast as they safely can be passed on, because only by so doing can the volume of business be increased to the point that will provide more and more employment which will absorb those who have been displaced by the labor-saving devices. This is something which calls for the highest amount of cooperation between cost accountants and management, and for the highest degree of judgment in determining just how far a business can safely go. It is all very well for an outsider, for somebody who has never been in business and is unacquainted with its problems, to come in and advise business to cut the price. But we all know that the company which goes too far in that direction is creating for itself and for the economic world generally a great amount of trouble, and the problem is to balance these various forces and come to a right and true judgment as nearly as is possible in the circumstances.

*Has the Accountant Been Too Conservative?*

But as I consider the publications of the N. A. C. A. and the speeches which we have heard in our conventions and from chapter platforms, I have the feeling that there has been a slight overemphasis on the conservative side, namely, in applying our overhead only on the volume of business which we have experienced in the past, and not thinking quite enough about the potential volume of business which we might get in the future. I do not pretend for a moment that this is a simple question. It is a very intricate question indeed; it raises the problem of how elastic the market is; in other words, if

you reduce the price, can you get a larger volume of business? Will the increase be sufficient to compensate for the price reduction?

It may be that this overemphasis of the conservative side is a necessary correction of another powerful influence. Business men are made all too conscious, by the incessant forces of competition, of the tendencies to reduce prices, so that in many areas the order of procedure is to cut prices first, and then discover the economies which make those prices possible. Where this condition has prevailed it cannot be charged that the conservatism of accounting has retarded the adjustment of business to the adoption of labor-saving devices. In any case it is clear that the competitive order goes a long way to take care of the responsibilities of business to its customers.

### *Taxes and the Responsibilities of Business to Government*

As to the responsibilities of business to government, we are all acquainted with the income tax. A large part of this responsibility is comprised in the preparation of a proper and correct income tax return, indicating the liability of the business to the government for an income tax. That clearly is something which calls for a great amount of effort by accountants. Accountants have in the past helped to make the income tax administration possible and workable. Many of us can remember the chaotic conditions of 15 to 20 years ago, and people going about—people who well understood what they were talking about—saying that the income tax would have to be repealed because it was administratively impossible. But it was in those days made administratively possible by the services and the good offices of accountants working for the government, for private industry, and as public accountants.

Today we have new proposals before us. We have new theories of taxation, and it is proposed not only to tax income, corporate income as such, but to tax again that part of corporate income which remains undistributed. That, unquestionably, will lay greater responsibilities than ever upon accountants, because the problems as to what is proper to distribute, what are the financial needs of the business in maintaining a healthy current ratio, in maintaining its plant and its inventories in a satisfactory condition, are problems on which an accountant must necessarily supply the information for good judgment, and hence it appears again that, when society lays greater responsibilities upon business, business must turn around and pass much of those responsibilities on to accountants. And again

it is being asserted in some quarters that this new law will prove administratively unworkable, because of its complexity. Whether this be so or not, it is certain that, in so far as it is found practicable, that result again will come from the efforts of accountants who find the means of giving it effect.

Before I go further I would digress to one other point. Many people, in discussing these responsibilities of business to the various groups named, are disposed to speak as if these groups were separate and distinct, but they are not. Stockholders work somewhere; they are employees. They buy things and consume things; they are customers. The various groups overlap one another to a very considerable extent, and in many of our public discussions that fact is often forgotten. It is, however, convenient to deal with them here in these groups, and legislation has, in fact, tended to deal with them under these various categories of employees, stockholders, customers, and so on.

### *Principle of the Securities Acts*

The keynote of the legislation known as the Securities Act and the Exchange Act is that investors are to be protected by furnishing to them full, complete, and reliable information about the financial condition of the business.

I ask you, where is such information to come from? Accountants, of course, must provide it, and here accounting resources are again to be taxed in the highest degree; not only the technical processes of accounting but also that accounting judgment which is so important must come in and be applied to this problem of setting up sound balance sheets and sound income statements, if investors are to have the kind of information which they ought to have, and with which the legislation is designed to provide them.

### *S. E. C. Does Not Approve Securities*

This is something that many people are not entirely clear about. Some of them have the impression that there is some element of approval or guarantee by the government upon securities listed with the Securities and Exchange Commission, but that is emphatically not so. On almost every release which under the Securities Act issues from the Commission there is printed the words, "*Note:* In no case does the act of filing with the Commission give to any security its approval or indicate that the Commission has passed on

the merits of the issue or that the registration statement itself is correct."

In other words, there is no element of approval; there is no element of guarantee. The whole thing consists in furnishing sound, reliable, complete information to the investors, and then leaving the investors to use their own judgment. If, for example, anybody does want to undertake to manufacture gold bricks out of sand, and if others do want to put their money into it, the government will not intervene, providing everybody understands exactly and clearly what is going on. But as a matter of practice these conditions would not be likely to be fulfilled to the satisfaction of the Commission. Other sections of the Securities Act (§ 17) authorize the Commission to prevent the issue of securities for fraudulent purposes, and it is not probable that a scheme which was inherently fraudulent could be presented to investors with such candor and completeness of disclosure as to escape the condemnation of the Commission. Even these sections, however, lay their emphasis upon the character of the information by means of which people may be deceived.

This was very well expressed in a recent case in England, and some of those English cases have had some influence on our American legislation. But the case I now refer to has been quite recent, and is known as the Pepper Case. Some of you may have seen it quoted in the *Journal of Accountancy*. The learned judge used a very effective expression in summing up the situation. He said:

The argument is not that in this or that particular this prospectus was untrue. The argument is that its whole purpose and effect were to deceive. It is said that no suitable words could have been included in the prospectus to repair the omission. It is not quite clear what that proposition means. If suitable and true words had been there it might well be that the prospectus would not have been of much use. Suppose there had been a note: 'N. B.—You are apparently being invited to subscribe in a well-known old-established ordinary business carrying on its operations on approved lines. You are really being invited to trust your money to a gambling speculation to make a corner in pepper.' It would have been the truth but the utility of the prospectus might have been extremely small.<sup>1</sup>

That expresses in a very few words the spirit of our own legislation. You can undertake any legitimate business, and can offer securities to the public and invite their subscription to participate in those activities, provided you make it entirely clear to everybody what the activities are, and what the attendant financial circumstances.

<sup>1</sup> Editorial, *Journal of Accountancy*, June, 1936, p. 405.

*Part Played by the Accountant and Accounting*

In all these things the question of depreciation, the question of overhead allocation, the question of inventory valuation, and other questions enter very materially into the determination of sound balance sheets and sound income statements, and the result is that the responsibilities which the American people, through their government, have placed upon business are, in turn, being largely passed on to accountants. They are the people who must function to supply the required information.

But it has also seemed to me to be one of the collateral advantages of this legislation, that many people not trained as accountants have been forced to think about a balance sheet, about an income statement, and about accounting problems more than ever before; directors, officers of corporations, lawyers, engineers, and people like that who have not had their primary training in accounting have been driven by this legislation, and the responsibilities which it placed upon them, to ask themselves: "What is a good balance sheet?" and "What is a proper income statement?" That is all to the good. It is very necessary. In fact, it is high time that our business men generally, our legal and other professional advisors, should still further acquaint themselves with the principles of good accounting practice.

*Opportunity for Younger Men*

It always happens at these conventions and at our chapter meetings that younger men will say, "Well, these problems of policy are very interesting, and I should greatly like to have a chance to participate in them, but they don't seem to come near me."

That is or has been true of all of us; we have all had to cut our eye teeth in these things. We have all had to take the early steps in learning accounting, and, if I may again refer to the Scriptures—I hope this won't get too Scriptural—it was the man who was faithful in a few things who was made ruler over many. And that is the way in which anybody and everybody goes up the ladder. It is true that the technical processes of accounting have to be carried out, and people have to make a beginning at those points. But personally, after traveling over this country and seeing a great deal of business, I have very little question but that, if a man really has the ability, the character, and the judgment to participate in the discussion of these problems to which I have referred, he will find ample oppor-

tunity to exercise that ability. We have in our own Association since its early days seen many young men go up the line and become more and more proficient in these things, and therefore acquire greater and greater responsibilities.

*N. A. C. A. Publications Show Accountants Aid to Management*

The things which have been discussed are well illustrated in a publication which our Association put out recently, namely, the "Topical Index" to all the publications since the beginning down to January, 1936. In connection with the preparation of this paper, I have taken occasion to study that "Topical Index" a good deal, asking myself what the N. A. C. A. stands for, and what it has done. If you will do the same thing, you will find that the outstanding and preponderant subjects of discussion have been standard costs, budgeting, and cost accounting for the different industries.

What does that mean? It means that by such measures, by budgeting, by standard costs, and by the application of sound cost principles to the different industries, accountants and cost accountants have furnished management with the kind of information it ought to have if it is successfully to carry out its responsibilities.

It is a very interesting and a quite astonishing thing to count the number of references in that "Topical Index" to the subjects of budgeting, standard costs, and cost accounting for the different industries, the last-named being listed under the several industries. That, I think, expresses the spirit of this Association. We have always endeavored, it has always been our purpose and our interest, to furnish the information to management and to others which will lead to effective and able and competent management, because it is only by such management that business will be able to carry on, and will assume successfully the responsibilities which have been placed upon it in our line, and that the happiness of the American people will be served.

CHAIRMAN MONROE: I think Professor Sanders, that that applause—that expression of appreciation—says more than I can hope to say.

There will be no discussion immediately following this talk. We will have our discussion after the second speaker.

Professor Sanders has spoken to us in a broad way of the necessity of legislation. He has touched upon most of the important legislation that has been passed in the last few years. Our next

speaker is going to confine himself to one piece of legislation. However, it is probably as important as most of the others put together.

Our second speaker is also a Past National President of our Association. Again, I am embarrassed to try to tell you of all of his accomplishments, both in the accounting field and in our own Association. I have a two-page biography, but I shall not attempt to read it. I am very happy to present to you, Eric A. Camman, former President of our Association, who is going to speak to you on the Social Security Act, at \$7,000,000,000 a year.

## THE FEDERAL SOCIAL SECURITY ACT \*

ERIC A. CAMMAN

Partner, Peat, Marwick, Mitchell & Co.,  
New York, N. Y.

LET me begin by reiterating what President Lohnes said and what Professor Sanders clearly indicated in his address, that what I have to say on the Federal Social Security Act will be free from any considerations of partisan politics. In my opinion the Act is not to be associated with current political trends but is rather to be regarded as a natural development in social concepts, expedited at this time by the influence of extraordinary economic pressure.

The object of my comments is to review briefly the terms of the law, to summarize its contents and to point out some of its significant possibilities. The more one studies the subject the more one becomes impressed with the far-reaching importance of this legislation.

It is perhaps not too much to say that the provisions of this Act may be of wider influence upon our conventions and practices, industrially and socially, than any other legislation which has been passed in recent years. Strangely enough, the Social Security Act has not aroused as much general interest, judging by headlines in the news, as some of these other measures. Its importance will be recognized, however, when it is considered that it will affect directly more than one-half of the gainfully occupied population, and indirectly the

\* Editorial note: Mr. Camman's remarks at the opening session of our meeting in Cincinnati were based in part upon material in an article prepared by him earlier and published in the *Journal of Accountancy* in April, 1936.

Through the courtesy of the publishers of the *Journal of Accountancy*, reference to this material and presentation of a chart and certain tables which appeared in that magazine are made possible.

entire population, and will require a span of about two generations to come into fruition in all its planned scope.

We are not the first country to undertake social legislation of the kind. Relative laws have been passed in eighteen or nineteen other countries. Great Britain has had some thirty-five laws or changes in its employment laws during the last twenty-five years. Hence, the subject and objects are not wholly new, but we have new or different problems in our country and new or different provisions proposed to deal with them.

Some of these provisions are of questionable merit, so questionable indeed as to cause grave concern in many quarters as to the consequence of attempting to carry them out. There is also some doubt as to the constitutionality of the present Act. It would be a mistaken idea, however, to rely upon a possibility of the law being declared unconstitutional for the remedy to faulty provisions. If this law is declared unconstitutional we shall, beyond a reasonable doubt, soon have another measure, and no one can tell whether it may not contain more vicious proposals. When we remember the number and variety of social movements which have gotten under way during these hard years, the Townsend Plan, the Share-the-Wealth Movement, the Ezekiel Plan proposing to give \$2500 a year to every worker, and others, all aimed to exert political pressure to bring about benefits for particular classes of the population, we must appreciate that there are forces at work that must be accepted and issues that must be met. It will not do to ridicule the impractical and fantastic phases of these movements and otherwise to sit idly by in the expectation that they will pass off like summer storms.

They would merely multiply. For instance, a news item in the *Wall Street Journal* recently described a measure put forward by Representative Goldsborough, offering a "social credit scheme" to give all an income of at least \$5 a month. The necessary money is supposed to come from an ingenious scheme whereby if one wishes to buy a hat priced at \$4 one pays \$3 in cash and signs a certificate for the remaining dollar. The certificate is to be discounted by the storekeeper and eventually is to be redeemed by the national government out of the "profits of the government."

The *Commercial and Financial Chronicle* recently reported the organization of a federation of the unemployed. The motion was adopted by a vote of some 130,000 in favor to 21,000 against, cast by delegates from twenty-five states, and with this motion a resolution was carried to form the Workers Alliance of America with a

membership of 300,000, and as a result of the vote a national membership drive was to begin in May. Efforts will be made to establish or form three hundred new locals with district organizers and to undertake the publication of an eight-page weekly newspaper for the unemployed.

My object in referring to these various movements is to call to your attention the seriousness of the situation and to indicate that it is incumbent upon us to take an interest in them and to study the present law with the object of guiding the administration and development of it into the right channels.

#### GENERAL PROVISIONS OF THE ACT

The Social Security Act, as most of you know, contains some seventy-five sections separated into eleven titles or chapters. In substance these consist of four parts in the program. The first part provides for monthly old-age pensions for employees in certain occupational classes who reach sixty-five years of age and retire. The second part sets up machinery for unemployment compensation for employees, again in certain occupational classes closely parallel to those covered in the first part, except that they must be persons who have been employed and are thrown out of work. This part also contemplates an administration for finding suitable jobs for them in private employ or, failing that, in times of serious depression when compensation is exhausted, in public works. The third part authorizes the appropriation of funds in the shape of grants to states for social service toward the welfare of mothers and children, of the blind, of the public health and of needy aged persons who do not come under the old-age benefit plan mentioned in the first part. Lastly, the fourth part concerns the administration of the other three parts. It is not one of the major objectives but it is so large and inseparable a phase of the whole program that it really deserves mention as a major part. Administration also includes research and future development in social legislation and in policies in the field of social welfare.

Taxes are provided out of which, for all practical purposes, the necessary revenues are to be derived. The tax rates are set on a graduating scale beginning at 1% and rising through the next twelve years to the maximum of approximately 9%. I say approximately because, depending upon the provisions of state laws, the maximum may be slightly more. The 9% is to be divided approximately into 6% paid by employers and 3% by employees.

# EFFECT OF RECENT FEDERAL LEGISLATION 19

There have been some predictions to the general purport that the tax on employers of 6% will ultimately grow to be 10 or 15% in price advances. There have even been references to the payroll tax as a pyramiding one like the sales tax. Such predictions are fallacious. We should not make the error of overstatement in our zeal to combat measures which we regard as unsound.

The fallacy can be made clear by a simple illustration, using hypothetical figures to represent costs on products assumed to pass from one process to another through several steps. For instance:

	1 Materials and Overhead	2 All Labor	3 % Net Profit	4 Sales Price
First process . . . . .	\$ .11	\$ .88	10	\$ .11
Second process . . . . .	1.10	.59	8	.15
Third process . . . . .	1.84	2.24	12	.55
Fourth process . . . . .	4.63	10.80	4	.64
Fifth process . . . . .	16.07	4.02	6	1.28
Total . . . . .	<u>          </u>	<u>\$18.53</u>	<u>          </u>	<u>\$2.73</u>

Assuming that these figures represent conditions before the influence of the new tax, we may set up another table showing what the costs would become if each processor paid a tax of 6% upon labor, paid more for his raw materials and for his overhead and raised his profit sufficiently to maintain the original percentage on sales. The figures then would become:

	5 Materials and Overhead (a)	6 All Labor (b)	7 % Net Profit	8 Sales Price	9 Price Index (c)
First process . . . . .	\$ .11	\$ .93	10	\$ .11	1.045
Second process . . . . .	1.15	.63	8	.15	1.048
Third process . . . . .	1.93	2.37	12	.59	1.056
Fourth process . . . . .	4.89	11.45	4	.68	1.059
Fifth process . . . . .	17.02	4.26	6	1.36	1.059
Total . . . . .	<u>          </u>	<u>\$19.64</u>	<u>          </u>	<u>\$2.89</u>	<u>          </u>
Increase over (1) . . .		<u>\$ 1.11</u>	<u>          </u>	<u>\$ .16</u>	<u>          </u>
Increase in final sales price per (1) . . . . .				<u>\$ 1.27</u>	

(a) At preceding increased sales price.

(b) At 1.06 to include tax.

(c) Ratio to previously existing sales price.

It will be seen that the increased sales levels do not exceed an increase of 6% from the respective former levels. Clearly if all of

the elements in the sales dollar rose from a level of 100 to 106 the resulting price level would be 106.

The illustration serves to show on the other hand what will happen if all increases are uniformly passed along. In that event the final purchaser pays the total taxes plus any increase in profit. The ultimate price has advanced only 6% but the aggregate increases have accumulated in it. This is not the same thing as a sales tax, however, which would advance automatically and geometrically. It is not probable that the payroll tax will be consistently and uniformly passed along, for a number of reasons which will tend to restrain the increase.

It has also been said that the Act will seriously reduce purchasing power through the combined effect of an advance in prices to 106 and a reduction in the income of employees to 97, the net result of which would be a reduction in purchasing power to 91½. It is altogether probable that this effect will not be fully realized and that the usual influences upon price behaviour will tend to restrain this effect.

It is true that a tax upon payrolls will fall unequally upon manufacturers and upon industries. A manufacturer with a low labor cost will pay a lower tax, being thus subject to a lighter burden than a manufacturer with a high labor cost who will pay a greater tax. The same disparity will appear between industries. This condition will raise new problems of adjustment, which are perplexing and with which we shall have to learn how to deal. It is not plain how to get around the difficulty by other tax rates, assuming payroll to be the proper basis, because the only apparent expedient would be a resort to steps varying the tax rates according to the percentage of labor cost. This expedient would involve great practical difficulties in administration and in the end would only be equivalent to assessing taxes at lower rates upon total costs, which would be coming quite close to a sales tax basis.

### THE COST OF SOCIAL SECURITY

The total cost of our Social Security Act may be expected to be in keeping with its unprecedented scope. I have estimated that according to the present terms this total cost will amount to some 7 billion dollars a year in 1980, when the provisions become fully operative. The Act itself does not provide for any such sum. It authorizes about 150 million dollars a year, but that is just the beginning. In April the President asked for 460 million dollars in the Public Relief

## Schedule 1

ESTIMATED REVENUES FROM PAYROLL TAXES UNDER FEDERAL SOCIAL SECURITY ACT (c)  
(Millions of dollars)

	Unemployment compensation tax			Old-age benefit tax		Grand total		
	To state unemployment funds (90%)	For state administration (10%)	Total (f)	To old-age reserve fund	For federal administration (b)	Total	Funds	Administration
1938 (a)	536	60	596	513	47	560	1,049	107
1940	748	83	831	662	53	715	1,410	136
1945	788	88	876 (1946)	1,137	60	1,197	1,925	148
1950	817	91	908 (1951)	1,783	94	1,877	2,600	185
1960	888	99	987 (d)	1,939	102	2,041	2,827	201
1970	960	107	1,067 (d)	2,095	110	2,205	3,055	217
1980	1,000	110	1,110 (d)	2,180	115	2,295	3,180	225

(a) Fiscal year ending June 30th.

(b) Administration allowance taken as the difference between revenue estimates and appropriations for the reserve, until 1950, and thereafter at 5% of total tax

(c) Minimum federal retention

(d) Based on ratio of growth in old-age benefit total tax.

(e) Figures taken from report of senate finance committee, May 20, 1935.

(f) Unemployment tax revenue estimates were based on four or more employees. The act as passed covering eight or more would reduce these figures slightly

Bill for the current year, of which, incidentally, 38 million dollars was for administration.

Looking to the future we find, according to the tables in the report of the Senate Finance Committee, that the total tax revenues in 1980 are expected to amount to 3,405 million dollars (see Schedule 1). This still does not represent the ultimate total annual cost, which it may be expected will be entailed in carrying out the various provisions of the Act on the part of the federal government and of the states together. As mentioned, I estimate the minimum annual cost will amount to 7 billion dollars. My estimate is based upon the following reasoning.

For the part of the program providing grants to states in aid of various social services other than old-age assistance, the Act originally contemplates expenditure of some 50 million dollars. (See Schedule 2.) This does not include the share which must be raised by the states themselves, which may be roughly estimated to be an equal amount. Adding for the probability of increases with the passage of time another like amount, one may set down for state grants at least 150 million dollars.

The 90% share of the federal taxes for unemployment compensation which the Act authorizes to be remitted to conforming states, if full advantage is taken of it, will amount to about 1 billion dollars in the year 1980.

It is also estimated that in 1980 the annual tax collections for the old-age benefit plan will amount to 2,180 million dollars. This sum is not sufficient to pay the benefits then expected to be payable and the insufficiency, to an amount of 1,400 million dollars, is intended to be derived from interest earned on the retirement reserve fund. It does not seem likely to me that this interest can be earned, as later explained, therefore we should set down at least another billion dollars annual cost which must be raised from general taxation. This addition will bring the annual cost of the old-age benefit plan to a total of 3,180 million dollars.

For the assistance of needy aged persons who can not draw benefits under the old-age benefit plan and therefore must be provided for out of state grants, a further allowance must be made. A reasonable estimate of the number of aged persons requiring such assistance in 1980 would be about 6 million and, computing the amount of such assistance at \$400 per annum per capita, the total cost would be, after including 5% for administration, 2,500 million dollars.

# EFFECT OF RECENT FEDERAL LEGISLATION 23

## Schedule 2

APPROPRIATIONS AUTHORIZED IN THE FEDERAL SOCIAL SECURITY ACT OF 1935 AND  
THOSE RECOMMENDED BY THE COMMITTEE ON APPROPRIATIONS JANUARY 21, 1936

	Amounts author- ized in the social security act for 1936 (a)	Amounts rec- ommended by committee on appropriations report Jan. 21, 1936 for 1936 (c)
Social security board—		
Grants to states—		
Unemployment (administration) (title III) . . . . .	\$ 4,000,000 (d)	\$ 2,250,000
Old age assistance (title I) . . . . .	49,750,000	24,660,000
Dependent children (title IV) . . . . .	24,750,000	5,000,000
Aid to the blind (title X) . . . . .	3,000,000	2,000,000
Total, grants . . . . .	<u>\$ 81,500,000</u>	<u>\$33,910,000</u>
Administration (titles I, IV, VII and X) . . . . .	530,000 (b)	1,000,000
Total, social-security board . . . . .	<u>\$ 82,030,000</u>	<u>\$34,910,000</u>
Treasury Department. public health service—		
Grants to states (title VI—sec. 601) . . . . .	\$ 8,000,000	\$ 3,333,000
Administration and research (title VI—sec. 603) . . . . .	2,000,000	375,000
Total, public health service . . . . .	<u>\$ 10,000,000</u>	<u>\$ 3,708,000</u>
Department of labor: children's bureau—		
Grants to states		
Maternal and child health (title V—part 1) . . . . .	\$ 3,800,000	\$ 1,580,000
Crippled children (title V—part 2) . . . . .	2,850,000	1,187,000
Child-welfare (title V—part 3) . . . . .	1,500,000	625,000
Total, grants . . . . .	<u>\$ 8,150,000</u>	<u>\$ 3,392,000</u>
Administration (title V—part 5) . . . . .	425,000	150,000
Total, children's bureau . . . . .	<u>\$ 8,575,000</u>	<u>\$ 3,542,000</u>
Department of the interior: office of education—		
Grants to states—vocational rehabilitation (title V—		
Part 4) . . . . .	\$ 841,000	\$ 350,000
Administration (title V—part 4) . . . . .	22,000	4,500
Total, office of education . . . . .	<u>\$ 863,000</u>	<u>\$ 354,500</u>
Department of commerce: bureau of the census—		
Administration . . . . .		<u>\$ 150,000</u>
Grand total (before including administration allow- ance in old-age benefit plan, running ultimately to about \$100,000,000—see schedule "2") . . . . .	<u>\$101,468,000</u>	<u>\$42,664,500</u>

- (a) Fiscal year ending June 30th.
- (b) The act authorized \$530,000 for administration of old-age assistance, dependent children and aid to the blind, as included herein, and an indeterminate amount for the social-security board, which is not included herein.
- (c) H. R. 10,464 for fiscal year to June 30th. The original bill (H. R. 9,215) having failed to pass at the 1st session of the 74th congress, some of the amounts now cover only five months instead of ten months' requirements.
- (d) For the fiscal year ending June 30, 1937, and each fiscal year thereafter, the amount for grants to states for unemployment compensation administration is \$49,000,000—  
increase of \$45,000,000.

Lastly for administration a reasonable estimate would be 225 million dollars per annum. (See Schedule 1.)

Summarizing these estimates we have the following amounts of annual cost:

State grants program .....	\$ 150,000,000
Unemployment compensation program .....	1,000,000,000
Federal old-age benefit program ..	3,180,000,000
State old-age assistance ....	2,520,000,000
Administration . . . . .	225,000,000
Total, before allowance for contingencies ....	<u>\$7,075,000,000</u>

### THE FEDERAL OLD-AGE PENSION PLAN

The old-age retirement pension plan in the Social Security Act stipulates monthly pensions to all employees who reach the age of 65 and stop working. The only conditions necessary to qualify a person for a pension is that that person shall have earned \$2,000 at any time throughout five years in certain occupations. The occupations are specified by excluding particular occupations, namely agricultural labor, domestic service, government employees, railroad employees, crews of vessels, employees of non-profit organizations of certain kinds and casual labor.

We have not time this morning to go far into the details of the amounts of the pensions and the further conditions surrounding their payment. I assume that you are all familiar with the text of the law which covers these features. It will be more useful to call to your attention some prominent aspects of the scheme as it is now laid down, which are open to serious question as to soundness and practicability. The first of these has to do with the establishment of a reserve fund. The Act contemplates the accumulation of a fund out of the taxes which are to be collected through the period of years until 1980 or thereabout. It is expressly required that the accumulating fund is to be invested exclusively in federal securities. The principal of the fund is expected to reach the amount of 46,900 million dollars in 1980, nearly 47 billion dollars.

It is extremely doubtful that this plan can ever be carried out. It has never been attempted before on any such scale. During the years in which these monies are to be collected we shall pass through probably not less than six or seven different federal administrations in Washington, throughout which period the integrity of this fund must be maintained unimpaired. Is it reasonable to expect in the stress of political struggles that the monies which the government is

receiving and which should go toward this fund will in fact be so appropriated and will not be drawn upon for other and apparently more pressing needs? We have not succeeded in accomplishing this on a much smaller scale, as Mr. Gunnarson has already pointed out in his article ("Social Security Legislation and Business Costs," N. A. C. A. Bulletin, December 15, 1935), in which he refers to a deficiency in the fund under the retirement system for civil service employees of almost 1 billion dollars, owing to failure to appropriate the amounts necessary to keep the fund on an actuarially sound basis. Private insurance companies which offer annuities can do so only because they are severely restricted in the establishment of proper reserves which are not subject to impairment by political or other influences. There are no such restrictions in the present Act, which merely authorizes future Congresses to appropriate the monies which are raised from taxes, leaving it to future Congresses to do so.

Another matter for concern is the requirement to invest the reserve in federal securities. The object, plainly enough, is to maintain the integrity of the fund from an investment standpoint, but the difficulty arises in the attempt to handle such a huge investment trust. What is to become of the national debt? The effect of the requirement can only be to freeze the national debt at something above 47 billion dollars. How much above is wholly a matter for speculation, but it seems reasonable to expect that the government will need to have some outstanding obligations to finance all its operations other than the old-age pension plan and this may easily raise the national debt to 60 billion dollars. This would be approximately twice the present national debt and would mean that the interest on the increase, about 1 billion dollars, must come from an increase in general taxes. If this reasoning is logical it is futile to talk about earning interest on the retirement reserve fund toward payment of pensions, when plainly it must come out of the pockets of the taxpayer.

Furthermore, beyond the question of the practicability of handling the retirement reserve fund, there is real questioning of the soundness of the actuarial basis as it is now designed. The terms of the provisions for benefits are such that the benefits are not at all proportional to the contributions. The lowest paid workers will draw the highest rate of benefit, which means that those who have contributed the least will draw the most. Conversely, those who have contributed the most will pay the way for the others. Not only is this true, but the rate of advancement in the amount of pension with length of employment is much more rapid for the lowest paid worker

than for the highest paid worker. For instance, the \$50-a-month employee is entitled to a pension after ten years of service amounting to 35% of his monthly pay, and in forty years this increases to 65% of his monthly pay. In contrast, the \$250-a-month employee would receive after ten years only 15% of his monthly pay and after working forty years only 32½%. These conditions are graphically illustrated in Chart 1.

Another illustration will serve further to bring out this disproportion. Under the present terms an employee earning \$900 a year will in forty years have accumulated an amount which with 3% annual compound interest would be sufficient to pay his pension at his proper rate for about 9 years. On the other hand, an employee earning \$3,000 per year would in forty years similarly have accumulated on his account an amount sufficient to pay his pension for about eighteen years. When we remember that life expectancy at 65 is something over twelve years, it is clear that the lower paid worker has not accumulated enough for his life expectancy and that the higher paid worker has accumulated too much. It is significant in this connection to recall that our lower paid workers are preponderant in numbers. Comparison of the pension obtainable under the present law with the cost of obtaining an annuity from any reputable life insurance company will show that the government plan is a mighty good bargain for any employee who can get in under the provisions.

From another standpoint we should also seriously consider whether we are satisfied that we have reached the stage of development in civilization at which it is necessary for the state rather than the family to provide for all aged persons. If it is the case that we have come to the point at which the state must maintain half the aged population, we must be prepared soon to have it take care of the other half also. From this point it is only a short distance to another at which we must be prepared to recognize the age of retirement to be 60 instead of 65. The changes involved in this process are so fundamental and the change in concept is so radical that we should consider the step most seriously before we start definitely in that direction.

#### UNEMPLOYMENT COMPENSATION

Time will not permit my going at any length into the provisions for the other parts of the Social Security program. Unemployment compensation generally seems to be a step in the right direction. Before the passage of the Act, manufacturers had already experi-

SOCIAL SECURITY ACT - FEDERAL OLD AGE BENEFITS  
 CHART SHOWING RELATION BETWEEN AVERAGE MONTHLY WAGES AND MONTHLY  
 PENSIONS AFTER 10, 20, 30 AND 40 YEARS

Average Monthly Wage	Monthly Pension after — years of employment			
	Dollars per Month			
Years	10	20	30	40
\$ 50	\$17.50	\$22.50	\$27.50	\$32.50
75	20.00	27.50	35.00	42.50
100	22.50	32.50	42.50	51.25
125	25.00	37.50	47.50	56.7
150	27.50	42.50	52.50	61.25
175	30.00	47.50	57.50	66.25
200	32.50	51.25	61.25	71.25
225	35.00	53.75	65.00	76.25
250	37.50	56.25	68.75	81.25

WHITE BARS - AVERAGE MONTHLY WAGE

SHADED BARS - MONTHLY PENSION AFTER 10, 20, 30, 40 YEARS

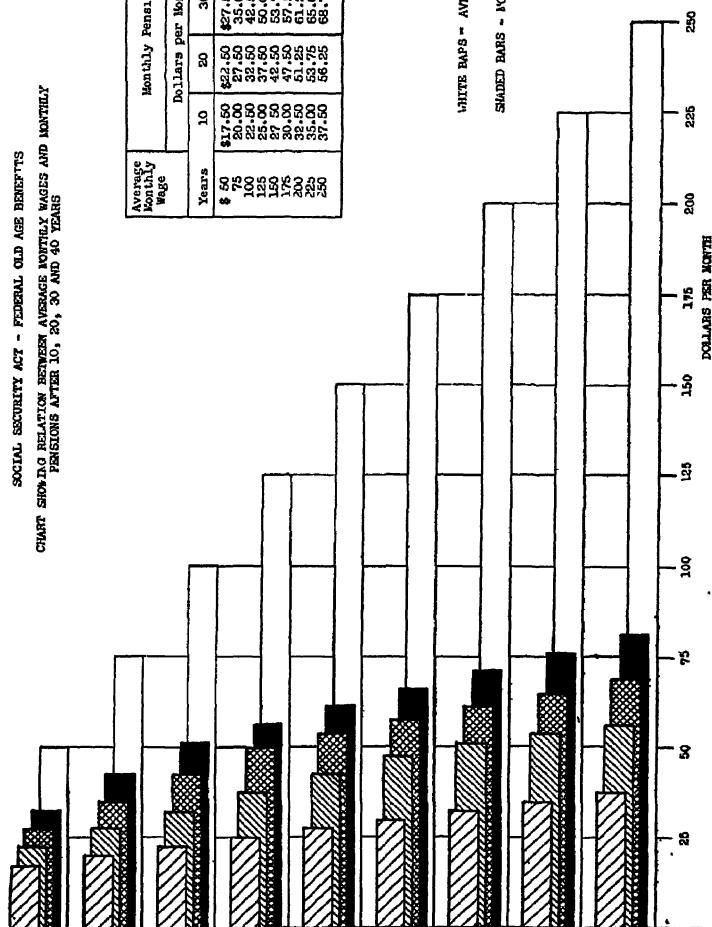


CHART 1

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175	30.00	47.50	57.50	66.25
200	32.50	51.25	61.25	71.25
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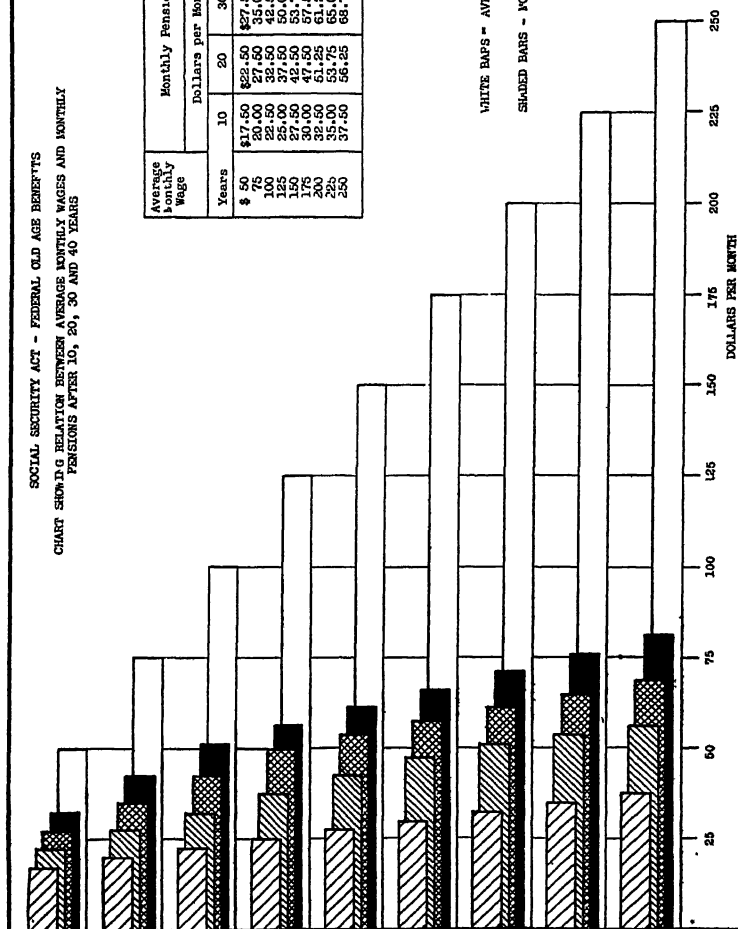


CHART 1

mented in unemployment compensation plans of their own, as well as sickness and health insurance. However, the problem really is too great to be dealt with adequately by individual manufacturers. It readily grows beyond the resources of any single manufacturer, and on a larger scale, beyond the ability of any single state to deal with it adequately with due regard to national welfare.

The Act wisely provides for freedom of experimentation on the part of the respective states in various forms of unemployment compensation plans, out of which experience in course of time should come an indication of which are sound and desirable and which are faulty and need to be rejected. Although there are numerous and complex difficulties to be solved in connection with unemployment compensation, this part of the program does not involve such risky and doubtful features as the establishment of the huge reserve under the old-age pension plan.

#### STATE GRANTS IN AID

The part of the program providing for grants to states in aid of social welfare would probably find universal support. This part deals entirely with the alleviation of suffering, the improvement of conditions of the handicapped and the raising of general standards of health. It is likely that federal aid and coordination will sustain and strengthen these worthwhile activities, the general social benefit from which will far exceed their cost.

#### ADMINISTRATION

Administration seems likely to require the establishment of accounting systems on a grand scale. I do not propose to go into this phase of the subject, however, not only because of regard for your patience this morning, but more urgently because we have on our program this afternoon a speaker who will talk upon this subject and who is eminently competent by virtue of his position and experience to deal with it. I shall merely point out in passing that it is contemplated under the Act to establish and extend federal-state employment offices. This is very clearly indicated in the report of the President's committee on economic security:

The employment service, however, will have to be still further expanded and improved if the measures for economic security we have suggested are to be put into efficient operation. It is through the employment offices that the unemployment compensation benefits and also the old-age annuities are to be paid. These offices must function as efficient placement agencies if the 'willingness-to-work' test of eligi-

bility for benefits in unemployment compensation is to be made effective. They now function to select the employees on public-works projects and should have a similar relation to any expanded public-employment program. Above all, the employment offices should strive to become genuine clearing houses for all labor, at which all unemployed workers will be registered and to which employers will naturally turn when seeking employees.

To perform these important functions, a nation-wide system of employment offices is vital. The nucleus for such a system exists in the United States employment service and the national reemployment service, which have always been combined 'at headquarters' and are now being consolidated in states where both have existed. No fundamental change in the relation of the federal and state governments to the employment offices is deemed necessary, but some amendment of the Wagner-Peyser Act is needed to enable the employment offices to perform all the functions our program contemplates. The larger funds required will come from the portion of the federal payroll tax retained for administrative purposes.

Closely related to the development of a more efficient employment service is the federal regulation of private employment agencies doing an interstate business. The interstate business of such private agencies can not be regulated by the states, and, for the protection no less of the reputable agencies than of the workers, should be strictly regulated by the federal government.\*

Apparently we shall have to have quite a number of such offices. There must be enough to have an agency located within a reasonable distance of all the workers who may be called upon to use them. We have something like 3,000 counties in the United States, and an estimate of only 3 1/3 offices per county would indicate a total of some 10,000 of such agencies. This estimate may be deemed high, but let me recall to your mind that we already have established under the Wagner-Peyser Act about 250 employment offices and that we already have some 1,250 branch offices under the national reemployment service.

### CONCLUSION

My comments have dealt in a necessarily brief manner with some of the more prominent phases of the new law. Obviously they can not cover the subject comprehensively, but I hope that they may serve to register upon your minds the fact that the federal Social Security Act of 1935 is a momentous development in our history. Its province and its requirements are vast in scope and its probable minimum annual cost when it gets under way will be 7 billion dollars. It is not a temporary experiment but a definite trend, that we may well regard as permanent, in the direction of forms of social welfare provisions. The manner in which and the extent to which these

\* Report to the President of the Committee on Economic Security, January 15, 1935, pp. 46, 47.

provisions shall wisely be made are matters of important concern to each and all of us.

CHAIRMAN MONROE: We will now throw the session open to discussion and questions. These two talks do not lend themselves so much to discussion, due to their nature, as they do questions. If you know the speakers as well as I do, you might hesitate to enter into discussion with them.

This talk of Mr. Camman's has built a very sound foundation for this afternoon's session in which I feel sure you will be interested. The talks will be concerned with the administration of the Act, which Mr. Camman has so clearly discussed from a political and economic viewpoint.

. . . The meeting recessed at twelve o'clock. . . .

SESSION II

THE STATISTICAL AND ACCOUNT-  
ING PROBLEMS OF SOCIAL  
SECURITY ADMIN-  
ISTRATION

TUESDAY AFTERNOON, JUNE 23, 1936

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LOGAN MONROE, *Chairman*

HENRY P. SEIDEMANN has since 1916 been a member of the staff of the Institute for Government Research, now a part of the Brookings Institution. He served as budget technician to General Dawes, the first Director of the United States Bureau of the Budget, devised a uniform system of accounting and reporting for the operating services of the national government which was accepted by the Comptroller General of the United States, and reorganized the financial administration of the territory of Hawaii, the Dominican Republic and the State of New Hampshire. During the past six years he has been engaged primarily in organizational surveys of state and local governments in the United States. During the present national administration he has been associated with the Agricultural Adjustment Administration and the Social Security Board. In the former he organized and systematized that part of the work having to do with the audit and disbursement of benefit payments to the millions of farmers who entered into contracts with the Agricultural Adjustment Administration to reduce production; and in the latter, he is now technical adviser to the Social Security Board on matters pertaining to organization and methods, particularly the organizational setup and machinery to be employed in administering Title II, the Federal Old-Age benefit provisions of the Social Security Act.

H HERMAN RAUCH is a graduate of the University of Wisconsin, holding the M.A. degree from that institution. For five years, before accepting his present position as Director of the Milwaukee Office of the Unemployment Compensation Department of the Wisconsin Industrial Commission, he taught social sciences at Marquette University. Mr. Rauch has been most active in connection with several recent unemployment insurance laws. When the subject of unemployment insurance came up in Illinois, he spent about three weeks assisting with the legislative program there. He has, likewise, spent some time in Ohio, assisting with bill drafting and appearing before legislative committees.

L E ZASTROW received academic training in economics and accounting from the University of Wisconsin, Extension Division, and has had a varied experience in public and private accounting work. Since July, 1927, he has been connected with the Bucyrus-Erie Company of South Milwaukee, Wis., the largest manufacturer of excavating machinery in the world, at present being Assistant to the Secretary and Controller. He also holds the degree of Certified Public Accountant, having passed the Wisconsin examination in the year 1926. Mr. Zastrow is well qualified to present the subject, having made a special study of the Wisconsin Unemployment Compensation Act and other state laws since their passage. He has been lecturing at the University of Wisconsin, Extension Division, on the provisions of the Wisconsin law and its application to business every semester since 1934, and has, during the last two semesters, included the Unemployment and Old-Age Annuity portions of the Federal Social Security Act.

# THE STATISTICAL AND ACCOUNT- ING PROBLEMS OF SOCIAL SECURITY ADMIN- ISTRATION

CHAIRMAN MONROE: This morning it was our pleasure to listen to a very fine talk on the Social Security Act, that is, the Act itself and its possible social and financial problems. This afternoon we are going to discuss the meat of the Act from our own viewpoint, *i.e.*, how it is going to affect us and our jobs.

We have three speakers. The first is going to speak from the viewpoint of federal administration by the Social Security Board. The second speaker is going to speak to us from the viewpoint of the state administration, and the third speaker is going to speak from the viewpoint of the industrial accountant.

Our speaker from the Social Security Board this afternoon has been connected with the government in the field of research work since 1916. He is Vice President of the Brookings Institution. In some of his more recent connections he was Budget Technician to General Dawes, the first Director of the Budget, and last year he worked with the Agricultural Adjustment Administration in charge of the auditing and disbursement of the funds to the millions of farmers and beneficiaries of the Act.

At the present time he is Coordinator of the Social Security Board. He is a man who wants to understand our problems, and he is going to tell us some of his so that we can talk and act on a common ground. He is a Certified Public Accountant and has written several books. I have great pleasure in introducing to you, Mr. Henry P. Seidemann

## THE ORGANIZATION AND SOME OF THE ADMINIS- TRATIVE PROBLEMS OF THE SOCIAL SECURITY BOARD

HENRY P. SEIDEMANN

Coordinator, Social Security Board,  
Washington, D. C.

IT gives me great pleasure to appear before you again. Some of the oldsters may remember me back in 1923 at Atlantic City. I am now associated with the Social Security Board, and the subject

of my talk is, "The Organization and Some of the Administrative Problems of the Social Security Board "

Before describing the functions of the several organization units set up by the Social Security Board to administer that part of the Social Security Act assigned to the Board, I would like to say a word regarding the underlying philosophy of social security.

Social security has to do with our relationship with all the institutions of life; with the family, with our neighbors, with the factory and the nearby store. It concerns all our activities and contacts that make up daily living.

### *The Problem of Social Security*

The problem of providing against economic insecurity is not new. It is as old as civilization, and the cost has always existed and always will exist. For years this country has been trying to avoid the type of destitution, the kind of demoralization that comes when the workers are cut away from all the stabilizing influences of life. We have been trying for years to do away with the hazards of enforced idleness and to eliminate poverty from a man's last years.

Throughout the history of the nation, provisions in some form have been made for those who could not provide for themselves, but these provisions have not been entirely adequate. In the complexity of modern social relationships, the need of providing a practical means for carrying competent people over periods of idleness is obvious.

For most people the ability to buy is dependent upon a job. The speeding up of industry shortens the work span of man's earning period while at the same time increasing numbers live to advancing years with old-age dependency constantly increasing.

The hazard of economic insecurity from unemployment and old-age dependency is inevitably a by-product of an industrial age, and the problem of providing against it has become more difficult to solve as industrialization has progressed.

The Social Security Act provides industry with a more nearly adequate, more orderly, and more sound method of providing against economic insecurity than ever devised before in this country. The methods proposed under the Act form merely a new approach to an old problem, better adapted, we think, to modern industrial conditions, and designed to give more adequate economic security to our people than ever before. The Social Security Act sets up the framework within which the nation can work out a more efficient system.

The provisions of the Social Security Act are administered in part by the Social Security Board, and in part by the Treasury Department, the Children's Bureau of the Department of Labor, the Surgeon General of the Public Health Service, and the Office of Education of the Department of the Interior.

The parts of the Act administered by the Social Security Board fall into three general categories: (1) Public Assistance; (2) Unemployment Compensation; and (3) Federal Old-Age Benefits.

### *Public Assistance*

Under Public Assistance are the provisions for grants by the Federal Government to the states for, (1) aid to the needy aged; (2) aid to dependent children; and (3) aid to the blind.

In relation to all three of these public assistance provisions, action by the states is necessary, and a cooperative Federal-State relationship for financial purposes is required. The Federal Government cooperates with the states in carrying out their assistance plans, making grants to the states as a contribution toward the cost of supporting those for whom this part of the Act provides assistance as well as toward the cost of administration by the states.

### *Unemployment Compensation*

The second major category is that of Unemployment Compensation. In this respect, also, the Social Security Act is essentially an enabling statute, designed to enable the states to enact and administer their own unemployment compensation laws. The administration of the state unemployment compensation laws is a state responsibility performed in cooperation with the Federal Government.

Under the Act the Federal Government does not require the states to enact unemployment compensation laws of any particular type. Their freedom to pass laws best suited to their local conditions and problems is protected. Except for certain basic standards, state acts may and do vary widely and still comply with the Social Security Act.

### *Federal Old-Age Benefits*

The third major category is that providing for Federal old-age benefits. This is the only feature of the Act in which the states do not participate in administrative responsibility.

The largest task which the Social Security Act places upon the Board is that of administering the provisions for Federal old-age

retirement benefits. Since this title of the Act presents many administrative problems, I wish to explain these provisions in some detail.

### *Provisions Relating to Old-Age Benefits*

Under the provisions of Title II, Federal old-age retirement benefits are paid to qualified individuals out of an "old-age reserve account" set up in the Federal Treasury. A qualified individual is one who is at least sixty-five years of age, who received total wages with respect to employment after December 31, 1936, and before attaining sixty-five years of age, of not less than \$2,000, and who has been employed in some five different calendar years after December 31, 1936, before attaining the age of sixty-five years.

The "wages" on which benefits are based do not include certain wages; for instance, wages received for agricultural labor; domestic service in a private home; casual labor; service on a vessel documented under the laws of the United States or any foreign country; service for Federal or state governments or their political subdivisions or instrumentalities; and service for wholly non-profit literary, religious, scientific, charitable, educational and humane organizations.

Service in the employment of a carrier as defined in the Railroad Retirement Act of 1935 is further excluded. In addition, that part of an individual's remuneration in excess of \$3,000 per year from any one employer is not counted as such "wages."

A qualified individual is entitled to retirement benefits from the day he reaches sixty-five, or on January 1, 1942, whichever is later, and ending at his death. The retirement benefits will be paid at monthly intervals in amounts computed as follows:  $\frac{1}{2}$  per cent of the first \$3,000 of total wages (as defined), plus  $\frac{1}{12}$  per cent of the next \$42,000 of such total wages, plus  $\frac{1}{24}$  per cent of all over \$45,000.

The minimum monthly benefit payment is \$10, and the maximum \$85.

Persons who leave included employment after having qualified as to the number of years over which the wages have been earned and the amount of such wages, will become qualified individuals on attaining the age of sixty-five. That is, if a man works at some time during the requisite number of years and earns a total of \$2,000 or more in wages from a covered employment, he will be eligible for old-age retirement benefits on reaching the age of sixty-five, even

though in addition he may have worked in an excluded employment for twenty or thirty years.

Employees whose total wages or length of employment as defined in the Act prior to their attaining the age of sixty-five are not sufficient to qualify them for retirement benefits, will be entitled to a lump-sum payment of  $3\frac{1}{2}$  per cent of their wages as defined in the Act upon reaching that age.

Receipt of a lump-sum payment or annuity under Federal old-age benefits will not disqualify a person from receiving aid under state old-age assistance plans if need for assistance can be established so as to qualify under the state law.

The Act provides that the retirement benefits received by any individual shall be reduced by the amount of one month's benefit for each calendar month in which the qualified individual receives wages for covered employment after reaching the age of sixty-five.

The estates of individuals dying after attaining the age of sixty-five are entitled to  $3\frac{1}{2}$  per cent of the total wages paid to such individual with respect to employment (as defined in the Act) subsequent to December 31, 1936, less the amount of old-age retirement benefits actually paid to the individual during his life.

Death payments of  $3\frac{1}{2}$  per cent of total wages (as defined) are made not only to the estates of qualified individuals, but to the estates of those who have earned some money in the included employments but who have not worked long enough or earned enough to become "qualified."

### *Organization*

With this preliminary statement of the duties of the Social Security Board, we are ready to discuss the organization that has been set up by the Board to administer the activities delegated to it in the Social Security Act.

The functional organization chart on page 38 shows graphically how the Board is organized to perform its work. I shall only refer to the chart as I describe the operations of the several bureaus and offices set up to administer the Act.

The Board is composed of three members, under whose immediate supervision are the offices of the Executive Director and the Coordinator.

The bureaus have been subdivided under two separate major headings, namely, operating or line bureaus comprising the Bureau of Unemployment Compensation, the Bureau of Federal Old-Age Bene-



fits, with its district and branch offices, and the Bureau of Public Assistance.

In the other division we have the service bureaus and offices, namely, the Office of General Counsel, the Bureau of Research and Statistics, the Bureau of Accounts and Audits, the Bureau of Business Management, and the Informational Service.

### *Office of the Board*

The office proper of the Board includes the offices of the Executive Director and the Coordinator. The Board has delegated and concentrated within the office of the Executive Director all of the administrative and executive duties of the Board, and this official, under the supervision of the Board, has general supervision and direction of the work of the different bureaus and offices, and immediate supervision and direction of the regional offices.

The office of the Coordinator was created in recognition of the need of a staff agency whose function would consist of keeping in touch with the organization, methods, needs and problems of the Board as a whole, of making special researches required in order to develop the facts upon which fundamental decisions regarding policies and procedures must be based, and of acting as technical adviser to the Board in matters of organization, administration and coordination.

For example, it was the Office of the Coordinator that developed the present organizational structure of the Board and that tentatively determined the location of all our field offices after taking into consideration such factors as density of population, number of compensables, and other essential elements.

### *Bureau of Unemployment Compensation*

The first operating bureau is the Bureau of Unemployment Compensation. This bureau has as its function the analysis of state unemployment compensation laws and certification of such laws to the Board for approval, as required by Section 903 of the Social Security Act, the review and recommendation to the Board of the amounts to be certified by it to the Secretary of the Treasury for administration of approved state plans for unemployment compensation, and the cooperation with state administrative agencies with regard to general policies and administration of the state unemployment compensation acts.

This bureau, in addition to the office of its director, has a Division

of Legislative Aid and Approval, a Division of Administration, which includes a Procedure Section whose functions are similar to but smaller in scope than the Procedure Section of the Bureau of Federal Old-Age Benefits.

This division also includes a Grants Section to review and recommend to the Board amounts to be certified by it to the Secretary of the Treasury for administration of approved state unemployment compensation laws. This bureau, as well as all others, will have representatives in the regional offices.

### *Bureau of Federal Old-Age Benefits*

The largest organization unit of the Social Security Board will be the Bureau of Federal Old-Age Benefits. The operation of this Bureau will be conducted along lines that have been laid out by life insurance companies. There will be four major divisions with one service section.

The four divisions include the Division of Records; the Division of Claims which will adjudicate all claims presented for settlement; an Actuarial Division whose duty it will be to make studies in collaboration with the Bureau of Research and Statistics for the purpose of determining long-time policies of the Board; and a Field Service Division which will supervise the work of the district and branch offices of the bureau.

We may have as many as one hundred district offices, as many as one thousand branch offices, and possibly two thousand part-time offices to contact and serve employers and employees eligible under the Act

It is this Bureau, the Bureau of Old-Age Benefits, which will maintain individual records showing the earnings of approximately 26 million employees of some  $3\frac{1}{2}$  million employers. It is anticipated that subsequent years will reflect a normal increase in the number of individuals covered by this part of the Act, and that the number of individuals for whom records will ultimately be maintained will reach 35 or 40 million

The number of records to be kept will increase materially as a result of the fact that a record once set up will necessarily be maintained until the employee reaches sixty-five or dies, and that many persons normally employed in exempt employments will at some time be engaged in a covered employment

The provisions of the Act relating to old-age retirement benefits become effective in 1937, and in anticipation of that date a system of

record-keeping is now being developed under which a statement of the earnings of each individual will be accumulated.

While no final decision has been reached, it seems probable that such records will be built up from reports submitted by employers. In view of the magnitude of the task of compiling the records relating to the millions of employees in the various industries throughout the United States, no one need worry that the requirements for reporting will be more than the barest minimum required to carry out the purposes of the Act.

Aiming at simplification, the system of collecting the information and maintaining the records is now being devised. Before making a definite announcement concerning the methods of gathering the information and maintaining the records, the entire system and procedure should be completely formulated. I believe that everyone concerned will appreciate the fact that the system and procedure for so large an undertaking should not be decided upon too hurriedly. Obviously, it is of the greatest importance to formulate a system which will be best adapted for the purpose, and be at the same time as simple as possible for everyone concerned.

#### *Bureau of Public Assistance*

The Bureau of Public Assistance has as its function the analysis of state administrative plans for public assistance, and the certification of such plans to the Board for approval, the review and recommendation of the amount of Federal grants-in-aid to be certified by the Board to the Secretary of the Treasury to those states which have state plans approved by the Board for Old-Age assistance, as provided in Title I; dependent children, as provided in Title IV; and aid to the blind as provided in Title X of the Act. This Bureau also has the duty of cooperating with the states in the administration of approved state plans for these three categories.

#### *Office of General Counsel*

The office of General Counsel performs the usual functions of a general counsel, and at the present time is primarily engaged in the interpretation of the Social Security Act, the examination of state laws, the review of administrative rules and regulations, and the drafting of necessary legal forms for the administration of the Act.

*Bureau of Research and Statistics*

The Bureau of Research and Statistics embraces the duties of planning and conducting the statistical service, and of the research and analytical work necessary for the administration of the Act.

It will conduct regular and special investigations pursuant to its duty of "studying and making recommendations as to the most effective methods of providing economic security through social insurance, and to legislation and matters of administrative policy concerning old-age pensions, unemployment compensation, accident compensation, and related subjects." As previously stated, this Bureau will collaborate in the actuarial studies in connection with Federal old-age retirement benefits, for the purpose of determining long-time policies of the Board, and for the submission of reports to Congress, as provided by the Act.

In addition to the office of its director, this Bureau includes the following units: Current Information, Legislation and Administration, Statistical Reporting, Economic Studies, Analysis and Planning, Special Studies, and Field Research.

*Bureau of Accounts and Audits*

The Bureau of Accounts and Audits has as its function the establishment and maintenance of complete control over all phases of the financial operations of the Social Security Board.

Its work comprehends the maintenance of control accounts of the detailed employees' records maintained in the Bureau of Federal Old-Age Benefits, the complete audit and examination of all administrative payrolls and vouchers, the periodical audit of the records of the Bureau of Federal Old-Age Benefits, the field audit of all expenditures of states for unemployment compensation administration and public assistance grants, a spot audit of unemployment compensation payments and public assistance expenditures of the states, and the maintenance of a uniform system of accounting and reporting to control and to report the kind of financial data needed by the Board for administrative purposes.

The Director of this Bureau is the certifying officer of the Board for all expenditures under the Act, except grants to states which according to the Act must be certified by the Board to the Secretary of the Treasury.

In addition to the office of its Director, the Bureau of Accounts and Audits has as one of its major subdivisions a Constructive Ac-

counting Division, whose services are available for the use of the states both in the Washington headquarters and in the field offices.

The hope is that this division will be able to simplify the accounting and reporting procedures for state unemployment compensation authorities and public assistance officials, and to harmonize these with those required by the Bureau of Internal Revenue and the Social Security Board's Bureau of Federal Old-Age Benefits.

Other divisions under the Bureau of Accounts and Audits include Accounting and Budget, Administrative Audit, Administrative and Service, and a large Field Audit Division.

#### *Bureau of Business Management*

The Bureau of Business Management has as its duties the servicing of all organization units of the Board in regard to business operations. This comprehends the centralization in this office of all matters having to do with personnel, space, purchasing, stenographic service, mails and files, printing and duplicating, and miscellaneous statistical and drafting service.

#### *Informational Service*

The Informational Service has the duties of answering inquiries of employers, of acquainting the twenty-six million employees with their rights and reasons for payments, and of meeting the demands for information from the public. The principal subdivisions of this office are Industrial Relations, Educational, Editorial, Publications, Inquiry and Library.

#### *Regional Offices*

By reference to the chart you will note that we have established twelve regional offices for the purpose of maintaining close relationships with the cooperating states, and of supervising the work of the representatives of the various bureaus and offices of the Board located within each regional area.

Each regional director is a representative of the Social Security Board in his region and, subject to the Executive Director, is responsible for the conduct of relationships between the Board and the states within his region.

The staff of each regional office, when fully recruited, will consist of the regional director, an executive assistant, a regional attorney and specialists assigned to the regional office by the several bureaus

of the Board, and certain facilitating personnel such as stenographers and the like.

At the present time it is not contemplated that the regional director will have direct supervision over the work of the district and branch offices of the Bureau of Federal Old-Age Benefits. The branch offices when established will report directly to their respective district offices and the district offices will communicate with, report directly, and be responsible to, the Bureau of Federal Old-Age Benefits in Washington.

As indicated on the chart, the Executive Director, under the general supervision of the Board, has immediate supervision and direction of the regional offices, while the district and branch offices of the Bureau of Federal Old-Age Benefits now being established will be under the immediate supervision of the chief of the field division of that bureau, who will have a regional representative in each regional office, which representative, however, as already explained, will be subject to administrative supervision of the regional director.

### *Social Security Account Numbers*

When I first discussed the subject of my address with Dr. McLeod, I was not sure that our plans would be sufficiently advanced to discuss the subject of enumeration and the assignment of Social Security account numbers. Since that time, however, we have completed our study of this subject and I am sure you will be interested in hearing something of the plans which the Social Security Board has in mind regarding the forthcoming assignment of Social Security account numbers. Our purpose in assigning numbers is to facilitate the maintenance of the accounts of employees eligible for Federal old-age retirement benefits.

The use of such numbers will facilitate reporting and prevent errors which might occur if an attempt were made to maintain records using only the names of the individuals, since there are many persons whose names are exactly alike.

The object of the contemplated registration procedure is to assign the numbers and to set up an account for each employee, so that when he attains the age of sixty-five there will be an official record of his attainment of that age and of his total earnings, both of which are necessary to the computation of the amount of the monthly retirement benefit which he will receive. The procedure for assignment of numbers has no connection with the taxes payable by employers.

If the numbers are to be assigned through the voluntary cooperation of employers, it is desirable that this be accomplished before January first next. The form which the employee will probably be required to fill out will call for his full name, address, father's given name and mother's maiden name, sex, race, and the name of present employer (all for the purpose of identification, to distinguish the individual from others of the same name) and date and place of birth. The employee will hand the completed form to an agent of the Board, who will examine it to insure its completeness, and assign a serial number.

### *Registration of Employees*

Whether this procedure shall take place "on the premises" of the employer or "off the premises" at a central office in the locality awaits final decision. If done "on the premises" the employer would be asked, (1) to provide desk space for the Board's clerks, and (2) to instruct his employees to visit the desk in rotation. He would not be called upon to do any of the work involved, to provide any clerical help or to assume any responsibility for the result.

This enumeration and assignment of numbers is voluntary, but employees will obviously facilitate the establishment of their right to receive retirement benefits and the determination of its amount by applying for a benefit account number at the proper time. I believe that employers, too, will find its voluntary accomplishment prior to January 1, 1937 a help to them. The reporting of employees' earnings will be facilitated by the availability at the earliest possible time of an accurate and complete list of their employees' benefit account numbers, and any possibility of year-end congestion will be greatly diminished.

In order to secure the views of representative employers on the matter of voluntary registration of employees prior to January 1, 1937, the Board recently addressed a letter of inquiry to the executives of some three hundred trade associations throughout the country, asking for their opinions as to whether employers in the industries they represent would feel disposed to cooperate in such voluntary registration, whether they would prefer registration to take place "on the premises" or "off the premises," and in approximately which month they would prefer registration to take place.

The responses received from these trade associations have been most encouraging, especially with respect to the cordiality with which they expressed the desire to cooperate with the Social Security

Board in meeting the problems of administering the old-age benefit retirement provisions of the Act. Many gave the opinion we sought outright, others said they would take the matter up with their boards of directors or members, and still others asked for more information before definitely expressing their views.

We shall give the most careful attention to the weight of employer opinion thus expressed in coming to final decisions in respect to these questions.

### *Only Necessary Data to Be Requested*

Some editorial writers have expressed undue alarm at the nature of records to be kept. The following quotation will indicate this point of view:

The long arm of the Government records office would thrust about in lodging house and hobo jungle until the recreant came to light. . . .  
The last item of privacy will be destroyed for the rank and file. . . .  
Truly security is at the price of liberty.

The writer's conception of the "long arm of the Government" thrusting about until the recreant comes to light is quite the opposite from the method visualized by the staff of the Social Security Board. It is planned that all persons subject to the old-age benefit provisions of the Act, who work at any time, may obtain a benefit account number, and that an account number will be set up for each such person.

Then, should they temporarily retreat to a "lodging house" or "hobo jungle," the Board would have no interest whatever in following them. Should they later emerge and become employed, the record of the Board would be ready and waiting to receive the credit entry arising from their employment.

The Board is charged with determining the amount of earnings during the working life of each individual who becomes eligible for monthly retirement payments, or in whose behalf a lump-sum settlement is to be made upon his death, or, if "non-qualified," upon attaining the age of sixty-five. In order to determine such earnings, it is of course necessary to maintain the record already referred to in which successive wage payments which are reported by the employers are entered.

There will be no necessity for an employee to report to the Board his comings and goings, his marital status, his hat or collar size, the color of his hair or eyes, or any other similarly personal information. The record kept will be as simple and concise as possible,

bearing in mind that both the employers' and employees' interests must be fully protected.

Having secured the minimum of necessary information from the employees and having assigned a number to the account of each person, a suitable record will be established on which the earnings subsequently reported may be recorded.

The system of numbering may be described briefly as follows: The United States, including Alaska and Hawaii, will be divided into areas designated by the numbers from 001 to 999. Specific groups of these area numbers will be allocated to the several states and provisions will be made for the assignment of individual account numbers within such areas.

I might illustrate that: For example, New York may wish to subdivide the state into ten areas, and the area numbers assigned may be 001, 002, 003, and up to 010. That would subdivide the accounts of New York State and also be of some help to the administration in later years in the matter of identifying the individuals, because one of the questions on the application for retirement might well be: "Where did you apply for a benefit account number?"

The area number will be followed by the group number forming the fourth and fifth digits and may, if needed, consist of numbers 01 to 99. A serial number of 4 digits will complete the total of 9 digit account numbers, the 3 groups being separated by hyphens. This account number once assigned to the account of an individual will remain constant throughout his life. The complete number would be written, for example, as 123-12-1234. The first group will designate area in which registered, the second will have no significance except to supply an expansion joint which would give us a capacity of one billion provided we found this necessary, and the last four digits are the serial numbers which merely show the order of registration. This system of numbering will avoid duplication and also give us an inexhaustible supply of numbers.

Each of the 26,000,000 workers, more or less, who will be affected will be provided with a suitable card or device showing the account number which has been assigned to his account. The assignment of numbers will be made either under a program planned for completion prior to January 1, 1937, or upon the basis of the first earnings reports received subsequent to January 1, 1937.

A system of account numbers applicable to employers will also be established so that the entries on the individual records will show the source of earnings.

The work of the Records Division will be carried on in such a way that it can determine with the least possible delay the total earnings of an individual who has become eligible for annuity payments under the Act, or the total earnings of an individual who has died, in order that a lump-sum death benefit may be paid to his estate. The amounts so earned will be certified to the Claims Division of the Bureau of Federal Old-Age Benefits which is charged particularly with handling the detailed procedure relating to the settlement of claims. The work of this division will include the determination of the person entitled to benefits and other matters of similar character.

Plans are being made to furnish employees with periodical statements showing the amounts which have been credited to their accounts. This arrangement will enable employees to calculate the amount which would be paid to the estate in case of death, or as they approach the retirement age, to calculate the amount of monthly annuity which has already accrued in their behalf.

You can probably appreciate by this time the magnitude of the problem which confronts the Board in the organization and administration of the Social Security Act. The Board, I can assure you, will not impose any unnecessary burden on the shoulders of employers or employees. We shall keep the system as simple as possible, so that it may be operated efficiently and economically.

In conclusion, let me express the conviction that the persons in this audience today who know so well the need for providing against the hazards of insecurity are especially in harmony, I believe, with the spirit back of the endeavor to attain the objectives set forth in the provisions of the Social Security Act. Your assistance in attaining the objectives toward which we are striving, and the assistance of all the members of this influential Association which has direct contact with the people of every state in the Union, can be of immeasurable value in helping to promote the cause of social security and economic stability which the Social Security Act seeks to promote.

CHAIRMAN MONROE: I think Mr. Seidemann has told you enough so that you can realize the magnitude of the Social Security Board's work, and possibly understand why we have not learned more about the routine to be followed.

We are going to have discussion this afternoon after each paper. We are going to have to cut the discussion short, but I want to have

you get all you can out of it. If there are any questions you may ask about some routine or procedure to be followed about which the Board has not set up a definite plan, Mr. Seidemann will not hesitate to tell you. On the other hand, if there is some point he can explain to you which is definitely fixed, he will be only too glad to answer any question you may have.

W. J. MADISON (*Loose Wiles Biscuit Co., New York, N. Y.*): Do I understand that the Government is going to ask only for one means of identifying applicants for old-age pension benefits, and that is by the number system? In other words, there will be no fingerprinting or any other method of identification?

MR. SEIDEMANN: In answer to that let me say we do not contemplate fingerprinting for several reasons. One is that some people do not look upon fingerprinting as a protection but as a means of identifying criminals. We have devised an individual application form which will require answering about a dozen questions and we expect this to supply the data needed to assure identification at the time a beneficiary reaches retirement age. For example, we will ask him for his father's full name, and his mother's maiden name. We will also ask other pertinent questions to protect his interest and that of the Government.

We have practically completed the development of the system needed to enumerate all those persons eligible under Title II of the Social Security Act, but we have not designed the final application form; we are still working on it. It will insure protection to the individual, the employer and the Government in the matter of identification.

J. B. CARLIN, JR. (*Assistant Secretary and Treasurer, Forest Products Chemical Co., Memphis, Tenn.*): I take exception to the attitude of the Government that the man who submits to having his fingerprints registered is looked on as a criminal. In my hand I have a card with the number 85,000 on it. In the City of Memphis, industry has registered their employees by that system for the simple reason that where you have a large number of colored people as employees, that is the only way to keep up with them.

MR. SEIDEMANN: I cannot add anything to the discussion in that respect.

E. H. SCHULTZ (*Assistant Controller, Carnation Co., Oconomowoc, Wis.*): Wouldn't this be a marvelous time to educate the public to the fact that fingerprinting is a real means of protection? The Government is trying to do a lot of other things, why not start this educational program at the same time?

MR. SEIDEMANN: In the next decade we may be able to educate the public to look upon fingerprinting differently.

A. W. HOLLAR (*Dominion Forge and Stamping Co., Detroit, Mich.*): What is the status of an American citizen, residing in the States and employed in Canada, under the Social Security Act?

MR. SEIDEMANN: I do not understand your question.

CHAIRMAN MONROE: As I understand the question, the employer is a Canadian employer. The man is an American citizen, but earns his living in Canada.

MR. SEIDEMANN: This is a legal question, but I will venture a curbstone opinion. As I understand it, Title II and Title VIII of the Act apply only to employment in the United States.

CHAIRMAN MONROE: That man will have to buy himself an annuity.

J. W. SHEERAN (*Auditor, Smith Agricultural Chemical Co., Columbus, Ohio*): Mr. Seidemann, do you think it expedient at this time to go to undue expense in the way of accounting technique or form changes until we hear further from your Board?

MR. SEIDEMANN: The question is whether any organization should go to any additional expense at this time in building up additional personnel records. In other words, would it not be better to await the decision of the Board as to what will be required? I judge that is the question? Am I right?

MR. SHEERAN: Yes.

MR. SEIDEMANN: Well, that gives me an opportunity that I have long waited for. The Board has been greatly disturbed by these high pressure salesmen—I hope some of them are in the audi-

ence—because they have designed forms and printed “Social Security Act” on them, implying that the data shown would be required by the Social Security Board. One of the reasons I quoted the article I did as to the number of purported questions to be asked of employees in the administration of the Act was to refute such propaganda.

The forms I have examined have asked many questions of a personal nature. They want to know a man’s union affiliation; a man’s religion; and many other personal questions not needed in the administration of the Act. We shall not ask any question that is not absolutely essential to proper administration.

Now in regard to your question as to whether you had better wait, I would say “Yes,” because it will not be long before we will issue complete information for the guidance of all employers.

W. C. ARMSTRONG, Jr. (*Secretary and Treasurer, Rockbestos Products Corp., New Haven, Conn.*): I would like to ask if the information is going to be available to the employer as to how much the employee earned per hour or per week from previous employers. From some of the talks we have heard, we are led to believe that that is so.

That would be very detrimental for the employee, because if he had been working temporarily at a lower wage he would never be able to get up into the proper scale where he belongs.

MR. SEIDEMANN: The only items the Federal Government is concerned with are the earnings this month, or this quarter, or semi-annually or annually, depending upon the reporting period. If it is a quarterly report we are only interested in receiving a statement of his quarterly earnings. We have no concern with his former employment except to maintain a complete record of his earnings. The earnings from former employers collected on our records will not be available to present employers.

H. E. HOWELL (*Controller, Grinnell Co., Inc., Providence, R. I.*): From your last remarks, can we assume that it may be possible to report employees’ total annual pay or total quarterly pay, rather than weekly pay?

MR. SEIDEMANN: I think it would be well here to differentiate between the State system known as the Unemployment Compensation and the Federal Old-Age pension or retirement system.

The system I have been describing in some detail is the Federal Old-Age retirement system, and has no reference whatever to what your respective state laws may require. We are interested in the man's earnings, and it is quite possible, in fact it is almost decided, that so far as the Federal Old-Age benefit system is concerned, you can report an individual's earnings in lump for a month or for a quarter or for a semi-annual period, depending on the period for which the report is rendered. This is not final, but we are considering such a simplified reporting system.

ALEXANDER J. LINDSAY (*Senior Partner, Alexander J. Lindsay Co., Denver, Colo.*): As I understand the law, if the employer already has an old-age pension plan, or if he has his employees insured with private companies, he still has to comply with the Social Security Act.

MR. SEIDEMANN: That is the present law. You know the Clark amendment was offered but never passed.

C. O. RAINEY (*Cost Accountant, Trico Products Corp., Buffalo, N. Y.*): From the experience that I have had it is not going to be easy for the Federal Government to get the name or the age of the employee, especially from industrial records.

We just happened to make a survey in connection with the old-age retirement program and found that over sixty per cent of our employees had given the wrong name or the wrong age, and the only way we could get the correct age was to demand the birth certificate, and that was difficult. So your numbering system may be of some benefit in that respect, but I just wonder if others have had the same experience.

MR. SEIDEMANN: Insurance companies have had a similar experience. We have been informed that it involves changes in their records as high as ten per cent a year. We will, no doubt, have a similar experience and our records will necessarily have to be changed upon the submission of proper evidence. The United States Census Bureau, in taking the census of 1900, required a statement giving age and date of birth and we are hopeful of making use of this census in checking the age of all those persons born prior to 1900. As a matter of fact, the Census Bureau is now preparing an alphabetical index of the 1900 census records which we will use. This is espe-

cially valuable because the only other means of checking age would be birth certificates and in many areas these are not obtainable for people born prior to the census of 1900.

IRVING JOSEPH STONE (*Office Manager, The Stone Grill Co., Columbus, Ohio*): Has any definite system been formulated for collecting the tax of the employee? There was talk about the Government selling stamps which the employer would buy, and he in turn would sell to the employee. I wonder if that idea has been worked out.

MR. SEIDEMANN: As I understand your question it is, has the Board finally determined on a system of reporting wage earnings and will the stamp system be used for collecting the tax from employees and employers?

We have been studying this subject, to my knowledge, since November 1, and we have explored practically every system that might be applied to the Social Security Act. We have had a number of conferences with representatives of foreign countries, particularly the International Labor Office. We have given very serious consideration the use of stamps and we have also considered the report system, but final decision has not yet been reached. I may say, however, that the Treasury Department and some of the staff members of the Board are inclined toward a report system. If a report system is finally adopted, it will be a simplified report merely summarizing an individual's earnings during a stated period of time. The tax, however, will probably be collected monthly by the Internal Revenue Department and the draft of return I have seen does not require the reporting of any detailed data. It only contemplates the reporting of payroll earnings in a summary form to show the net payroll taxable.

FRANK L. SNYDER (*Assistant Auditor, Union Switch & Signal Co., Swissvale, Pa.*): Is it true that in the State of New York the registration number will require eight digits?

MR. SEIDEMANN: Are you speaking of employers or employees account numbers?

MR. SNYDER: Employees.

MR. SEIDEMANN: The number will be the same in all states. There will be no variation.

MR. SNYDER: Well, my understanding is that the numbers have already been assigned to New York State—from 25,000,000 to 75,000,000, or something like that—and there will be nine digit numbers in some states and eight in New York.

MR. SEIDEMANN: I fear you have been misinformed. As a matter of fact, we have already assigned area numbers to the State of New York, and they will use a nine digit number for employees.

MR. SNYDER: That is what I understood, but I understood there were eight digits in the number.

MR. SEIDEMANN: I think you are referring to the employer number. There is a difference between the employer and the employee account number. The area number in the case of employers is not required. However, the serial number will have five digits instead of four.

MR. SNYDER: How will the employers be numbered?

MR. SEIDEMANN: There will be seven digits in the employers' number. The first two will group the establishment according to industry and the other five digits will represent the serial order of registration. For example, the number will be written thus: 12-11234.

CHAIRMAN MONROE: It is unfortunate that we have to bring this interesting part of the meeting to a close. On behalf of the Program Committee and the entire Association, Mr. Seidemann, we want to thank you.

Mr. Seidemann has talked to you from the viewpoint of the Social Security Board of the Federal Government. Our next speaker is going to talk to you from the viewpoint of a State Industrial Commission. Our next two speakers come from the same state, and their talks are somewhat coordinated.

The next speaker is the Director of the Milwaukee Office of the Unemployment Compensation Department of the Wisconsin Industrial Commission. He taught social security at Marquette University for five years before entering this work, and in the last year he has appeared before several state legislatures which have been drawing up acts for their respective states.

I take great pleasure in introducing to you, Mr. H. Herman Rauch.

## PROBLEMS IN THE ADMINISTRATION OF UNEMPLOYMENT COMPENSATION LAWS

H. HERMAN RAUCH

Director, Milwaukee Office, Unemployment Compensation Dept.,  
Wisconsin Industrial Commission, Milwaukee, Wis.

THE members of the Milwaukee contingent will perhaps serve their interests best if they repose in peaceful slumber during the next half hour. They have heard me speak on this subject so often that I do not expect to contribute anything new to them. I consider it a personal compliment, and most gentlemanly on their part, that they decided to remain here during my part of this program.

There are a number of gentlemen from Illinois and Ohio whom I recognize because they participated actively in the uproarious discussions of unemployment compensation when the subject was debated before the legislative committees of their respective states. It is not likely that they will profit much from my present discussion. But I do hope that the rest of you who are vitally interested in this subject will find our Wisconsin experience both profitable and interesting.

As you know, Wisconsin was the first state to provide unemployment compensation for workers without jobs through no fault of their own. Funds out of which benefits could be paid were being accumulated during eighteen months before any other state followed the example. While there are now (June, 1936) fourteen states with such laws in operation, that of Wisconsin is the only one amongst them which preceded in operation the enactment of the Federal Social Security Act. Furthermore, Wisconsin is patron to a principle of procedure which, when compared with the systems of unemployment compensation known anywhere else in the world, is unique. It is the employer's "individual reserve" idea as contrasted with the commonly known "pooled fund." These being the facts, you will probably be interested in knowing what motives and ideas persuaded the citizens of Wisconsin to pursue this hitherto uncharted course. Knowing these things, you will better understand the administrative procedure.

Unemployment insurance started to receive the attention of the Wisconsin legislature as early as 1921. Labor industriously sought action on the subject, but nothing came of it until late in 1931 when a special session passed favorably (by enactment of its proposals) on the recommendations of a committee previously appointed to study the problem. It was this committee which brought forth a draft of an employer's "individual reserve" type of law.

You will recall that the years 1932 and 1933, very depressed years, brought forth similar legislative committees in about a dozen other states. Each report concluded that something must be done in future, but at the same time usually recommended that action be deferred until better economic conditions should prevail. During this period and even a year or two earlier, there was developing a general recognition that something must be done. There was much written about the unemployment benefit or the guaranteed employment plans operating in several dozen plants in the United States. The Chamber of Commerce of the United States and other employer organizations had formulated model plans which employers could adapt to their use if they cared to voluntarily institute a plan of assurance against unemployment. These associations recommended voluntary action by employers but objected to legislation which would achieve the desired result.

This disposition was reflected in the original Wisconsin law. It contained a provision that if a certain proportion (about fifty per cent) of Wisconsin employees should by a specific date be protected under approved voluntary plans of their employers, then the law would not take general compulsory effect. Consequently a number of prominent employers and their representatives spent considerable time attempting to induce other employers throughout the state to subscribe to such voluntary plans. This campaign aided measurably in spreading the gospel of unemployment compensation. It meant also that instead of fighting against the idea of affording the workers such protection, many employers were actively advocating it.

When the time arrived for determining whether the stipulated quota of workers were assured of either steady work or benefits, it was found that relatively few employers had completed the signing up process. This did not necessarily mean that nearly all employers were unwilling to see their workers so protected. It did mean that employers generally felt disinclined to assume such burden voluntarily, if by so doing other employers in the state, perhaps direct competitors, would thereby find themselves absolved from similar

liability. Consequently, many friendly to such protection preferred to see the law take general compulsory effect. Thus, the law became generally operative on July 1, 1934.

We indicated previously that organized labor fought for unemployment legislation many years before it became a reality. Its recommendations always called for a "pooled fund" to which all employers would contribute. Opposition to such a scheme was powerful and effective. When the depression of 1929 set in, it became obvious to those who cared to see, that something substantial would have to be done about the problem of unemployment. In order that a beginning might be made, labor agreed to give the employer's "individual reserve" idea a trial. It was then that the legislature took favorable action on the recommendation of the Interim Committee on Unemployment which reported in 1931.

At this point one might observe that out of about a dozen careful studies made on the subject during 1932 and 1933, all except one (Ohio) expressed preference for the "individual reserve." This is very interesting in view of the fact that at the present time, with little or no further study, most of the states are adopting "pooled fund" laws.

### *Reserve Type*

The reserve type of law is distinguished by the fact that *separate employers' accounts* are kept in the state fund, and each employer's contributions are completely segregated (except for investment purposes) so that his account will be liable to pay benefits only to his own employees when they become unemployed and are eligible. No employer subsidizes (as in the pool fund) irregular employment by other employers. Complete and automatic merit-rating is thus achieved, because each employer's account will reflect only his own unemployment experience and will, without exception, determine his own contribution rate.

This reserve fund system is thus clearly designed to induce and reward each employer's efforts toward steadier employment. It assumes that much of our chronic irregularity of employment is preventable.

Stimulus toward stabilization is given by the fact that when an employer has a specified percentage (usually the equivalent of ten or twelve and one-half per cent of his annual payroll) credited to his account (above and beyond his benefit payments) he ceases to be liable (while that condition prevails) for further contributions. The

reserve type of fund usually (though not necessarily) makes contributions the obligation of the employer alone.

### *Pool Type*

Under a pool system, *all contributions* by employers are *paid into a single, undivided fund*. Benefits will be paid from this single (pooled) fund to any and all eligible employees, without regard to the contributions of any one employer. Hence payment of benefits will be equally assured to all employees.

There may be (a few of the state laws of this type provide that there shall be,) a merit-rating provision in each law of this type, so that the contribution rates of different employers may vary to some extent (to encourage stabilization of employment) after several years of benefit experience. However, under all laws of this type thus far enacted no employer will ever be allowed to contribute at a rate below a basic minimum (usually one per cent or more) regardless of how favorable his own employment experience may be.

The pooled type of fund usually, though not necessarily, provides for both employer and employee contributions.

*History of the Pool Fund.* The pooled fund type of legislation was first introduced in England. The experience with it there has extended since 1911. During this time it has suffered many vicissitudes of fortune in that and other lands. While there are certain inherent weaknesses and undesirable elements in the system, not all its difficulties grew out of the plan. Abuses account for many of its troubles.

### *Pool vs. Reserve in Objectives*

The primary purpose of the pooled fund is to assure the equal treatment of all employees (regardless of whether they are engaged in stable or variable employments, or for whom they work) in the payment of benefits. While a pool plan does not contemplate paying benefits beyond the resources of the fund, it nevertheless does put emphasis on compensation rather than on stability of employment.

Critics of the pool dislike it because it obviously assumes that unemployment is a virtually incurable malady of our present economic system, so that systematic relief for its victims is the primary proper function or concern of unemployment compensation laws. Its theory is essentially defeatist.

The advocates of the reserve plan, on the other hand, assume the more reasonable and optimistic view that much of our chronic

irregularity of jobs should prove gradually preventable, and that compensation laws should encourage to the utmost (rather than penalize) efforts in this direction. By making every employer individually liable to pay benefits to his own employees, and by allowing any employer who has built his reserve to the required maximum to cease making any further contributions (while his reserve remains filled up), the reserve type of law puts primary emphasis on continuity of employment with benefit payments secondary, though provided for. In the reserve type of law each employer is assured from the start that his contributions will not and cannot be used to subsidize irregular competitors.

The fear of any employer that he may be subsidizing his unscrupulous competitor is warranted under a pool plan. In the basic structure of the pooled fund lies the opportunity for a selfish-minded employer to so plan his employment that his payroll will be cut off as soon as possible and thereby cause a drain of benefits on the fund. While he himself has no payroll, he is making no contributions to the pool. To such persons this type of funding is a distinct advantage, since the withdrawals by his employees will exceed the contributions he has made. Furthermore, instead of inducing the staggering of his employment so that all will have at least fifty per cent or more of their normal wage, it will incline the less social-minded employers to lay off immediately some of their workers and thereby throw the burden on the pool. In both of these situations, those employers who themselves seek to pursue better management formulas will actually be subsidizing such undesirable policies.

Obviously, such a possibility is subversive to good industrial and social procedure. It rewards incompetence, ill-will and irregularity. The parasitic employers reap the advantages gained thereby.

### *Comparison with Minimum Wage Legislation*

One of the best analysts of the problem in this country points, amongst other considerations, to the "fairly analogous problem of sweatshop competition and minimum wage laws. To protect wage-earners and fair employers from the competition of sweatshops, government requires *each* employer to pay a minimum wage. And no one seriously suggests that the real program would be to insure sweatshops by permitting low wages and then supplementing and subsidizing such low wages through a pooled minimum wage insurance fund. Yet this is substantially the purpose of a pooled insur-

ance fund in the field of unemployment compensation" <sup>1</sup> Just as the insurance of minimum wages would incline some to lower rather than to raise the wage scale and thereby draw greater gratuities from the common fund, so the pooled fund in unemployment compensation, by its very nature, gives added encouragement to bad employment policies.

### *Function of Job Insurance*

Legislation on unemployment should obviously put a premium on continuous or stabilized employment. The palliative purpose of any law should always be secondary to the correctional function

Any pooled fund, to the extent to which it makes any employer pay his neighbor's or competitor's compensation costs, does not, to that extent, put the pressure in the right place. While merit-rating of pooled fund contributions is designed to achieve the desired effect, good employers are only partially rewarded for their efforts. The very assurance of the pooled fund's greater adequacy (when compared to the individual employer's reserve) is based on the fact that even those employers who never cause benefits to be paid to their employees nevertheless will always be contributing a minimum percentage. If the merit rating were perfect, there would be little or no advantage in a pooled fund. Therefore, it is true that to the extent any employer must contribute in excess of the liability to his own employees, he is required by law to subsidize those whose benefit obligations are in excess of their contributions.

While it would generally be admitted that "working the fund," as it is called, is industrially and socially subversive, it is not difficult to see the additional possibility of collusion in the matter, between the employer and his workers. This removes the normal and wholesome check (automatically assured in the reserve system) which an employer would place on unwarranted benefit payments. An employee might easily be persuaded that drawing benefits would be more congenial than staying on the employer's payroll and receiving for work at reduced hours no more than the benefits would bring. This form of "mutual welfare" cooperation under a reserve plan would not be conceivable for the reason that an employer will hardly become party to a conspiracy against an account which it is his sole obligation to maintain. Nor would an employee be so apt to (or be permitted by his fellows to) rob a fund which was limited to the establishment in

<sup>1</sup> *Annals of the American Academy of Political and Social Science*, November, 1933, p. 73.

which he was working, and which was the sole source of benefits to him and his fellows.

### *Adequacy of Fund for Benefits*

The reserve idea is frequently criticized on the ground that an employer's account, where the employment experience is highly unfavorable, will not be adequate to pay the benefits and that the very employees who really need the protection (those who are not secure in their jobs) may find their employer's account depleted while employees in stable employment occupations will have a maximum fund available when there is little or no special need for protection.

It is undoubtedly true that, considering the problem from the point of view of benefit payments only, in some given situation an employee may under a reserve plan be confronted with an empty account, where under a pooled fund he could collect his due benefits. The full answer to this argument lies in several factors not all of which are contained in the consideration of benefit payments alone.

As indicated above, the pooled fund plan has been labelled by some of its critics as the "pessimists'" or the "defeatists'" plan. It presumes that little can be done about the correction of seasonal, technological, and other forms of periodic unemployment. It, therefore, with the characteristic mood inherent in its fatalism, tries to envision a system where benefits are assured and stability of employment is only incidentally and incompletely fostered.

The advocates of the reserve plan are of an entirely different frame of mind. They agree with both students and men of experience that "the hazard of what may be called ordinary unemployment, as contrasted with extraordinary unemployment due to business depressions, is more or less within the control of the employer. By adopting measures for stabilizing and regularizing employment he can reduce the hazard of ordinary unemployment. It must be recognized also that technological unemployment is to some extent subject to the control of the employer. The introduction of improved equipment or management . . . can be effected gradually in such a way as to cushion the shock. . . ." <sup>2</sup>

Mr. Marion B. Folsom (Eastman Kodak Co.) is many times the author of the statement: "I say that those people who say that nothing can be done about stabilization simply do not know what they are talking about. I am talking from practical experience. There may

<sup>2</sup> National Industrial Conference Board in "*Essentials of a Program of Unemployment Reserves*," p. 7, 1933

be companies that will not agree with me at all on this, but that is because they haven't tried it."<sup>3</sup>

The fact is that a considerable number of American companies, both large and small, in varying lines of industry, have demonstrated that efficient management can achieve a substantial measure of stabilized employment by devoting constant attention to the problem. Those who have tried it (Eastman Kodak, General Electric, those under the "Rochester Plan," etc.) testify that their plans, which were voluntarily adopted, furnished a real stimulus to regularization in addition to the inducements afforded by other recognized costs

It is frequently said that the cost added by unemployment compensation would not induce stabilization any more than would the now present large costs due to such policy. To that idea, Mr. Harold W. Story, Vice President, Allis-Chalmers Mfg. Co., answers: "The argument is logical but not practically sound. The practical situation will be as follows: The treasurer of the company, the guardian of the exchequer, has a keen eye for cash leaks, that is, the elimination of cash outlay that can be avoided; thus when a treasurer realizes that the cash leak of contributions to the reserve can be reduced or stopped by regularization of employment in his company's manufacturing department, he will be very arbitrary and insistent in his demands that the sales and manufacturing departments cooperate in stopping the leak. This is the natural psychology of the treasurer."<sup>4</sup>

But, were all this optimism to be proven false, and it should be found that the fluctuations within the relatively normal year—fluctuations due to physical seasonal causes, created customer habits, and sheer, haphazard causes—could not be much affected by application to the subject, "there would still be a definite advantage in allocating its costs, in so far as possible, to the industries and concerns that are its proximate cause. This can best be done through company reserve funds. The pooled insurance scheme . . . virtually treats unemployment as an overhead cost of the entire community."<sup>5</sup>

### *Effect on Competition*

The effect of a pooled unemployment system would be to confirm and facilitate a species of unfair competition. Mr. Story (*Nation's Business*, October, 1934) explains this by saying that if "the con-

<sup>3</sup> Senate *Hearings* on Economic Security Act, p. 559.

<sup>4</sup> American Management Association Bulletin on "*Pooled v. Reserve Funds*," 1935.

<sup>5</sup> Elizabeth Brandeis in *New Republic*, December 5, 1934.

sumer buys the goods which appear to be cheaper because the selling price does not include the full cost of producing them, he may force out of business the concern which really produces more cheaply if all the costs are counted—the concern which maintains its own workers the year round without being subsidized by the community” or by other industrial concerns. No one can deny that an industry or concern operating intermittently and frequently dumping its workers on the community to be supported somehow until needed again is really being subsidized by the community.

The advocates of the pooled fund usually show considerable concern over the fact that the reserves plan may not be adequate to pay benefits when due if there is much unemployment in a particular concern. In writing the pooled fund plans, however, they make a tacit admission that the same thing may be true of the pool, unless “temporary” (usually six weeks) employees are disqualified and unless a very definite limit is placed on the maximum an employee may draw if he worked in a “seasonal” employment. In addition to these major restrictions, there is usually the provision that unless an employee has a minimum number of weeks of employment (usually about twenty in one year or thirty-six in two years) in the preceding year or two he is totally ineligible for benefits. All this is in addition to the limitation that not more than a definite ratio of benefit weeks to weeks of employment can be claimed by the employees.

On the other hand, the reserve plans usually have a ratio provision (as liberal as those in the pooled fund), while not putting all the additional limitations for “temporary” and “seasonal” help, etc., into the plan.

One would be justified in submitting the surmise that were the reserve plans to hedge themselves around with protections as do the pooled plans, they, too, could give most reasonable assurances of adequacy in any emergency in which workers would really be eligible.

#### *Liability Limited to Amount in Fund*

It is well to observe again that both the pool and the reserve type of law do not guarantee payment of benefits beyond the resources of the fund.

The reserve plans generally contain a significant feature which will, except in extreme cases, provide an adequate fund. It is the provision that when an employer has such a benefit experience as tends to deplete his account his rate of contribution rises until the tendency is stopped or until the maximum (4% or 4.5%) is reached.

Finally, for the extreme cases where all these safeguards are not adequate, there is the provision that there shall be a "balancing account" into which is placed the balance of an employer's fund after he has paid all his liability when he either ceases to be subject or goes out of business in the state. Out of this fund the commission is authorized to take money to pay benefits when due to employees whose employer's account no longer has any credit. If a little larger balancing account is desired, the interest earnings can be placed into it instead of crediting them to the individual employers' accounts.

### *Adequacy of Fund in Prolonged Depressions*

Neither the pool nor the reserve type of law is aimed at tiding workers through major depressions. The limited period of eligibility (maximum in any case of twenty-six weeks) indicates that. Undoubtedly the fact that funds are being spent in bad times which were being accumulated in good times will have some effect on the cyclical trends and depths. No one can measure the extent of such influence. But the fact remains that the real purpose behind unemployment compensation is to cover the normal period between jobs in normal or minor depression periods if steady jobs cannot be provided and if such periods of unemployment cannot be reduced to the normal waiting period. The social problems consequent to prolonged unemployment and the problem of eliminating the serious economic displacements must be met by other, additional means.

### *Employee Contributions*

There are several substantial reasons why employee contributions should not be required in any unemployment compensation law.

In the first place, unemployment is an *industrial* rather than a *personal* hazard. This must be true, since no job insurance law of any type proposes to pay benefits to any employee who is unemployed by his own fault. Either discharge for misconduct or voluntary quitting disqualifies for any benefits. Unwillingness to work, unavailability for work, inability to work, failure to register for work as required, or refusal of suitable employment—all these conditions either totally or partially disqualify.

A close parallel to this as an industrial hazard rather than a personal one are the workmen's compensation acts of the various states. In all cases, the employer alone stands the direct cost. Here, too, no compensation is paid if the cause of injury is willful.

A standard argument for mutual contributions is that the em-

ployees will thereby be more interested in protecting the integrity of the fund. However, it is very possible that the fact of some personal contributions to a fund would lead obversely, to an exaggerated notion of "right" to draw from the fund, not only their own, but as much of anybody else's money as they can get hold of. The frequent attempts to sabotage insurance companies (insurance is a pooling of funds) in order to get the premiums and more back lend credence to this suspicion.

It is normally true that where employees are called upon to contribute the rate is so low as to represent no appreciable aid to building the fund. Furthermore, there is usually set a wage-rate above which no contributions may be taken. This rate may be thirty or fifty dollars a week. This is essentially bad social policy. The very people whose wage-rate is such as to make it probable they could afford the pay-check deductions do not get it. But those who are living at a subsistence level or under have something more taken from them. In this type of setup there is the peculiar anomaly that when a worker's wages are so low (by reduced employment) that he is eligible and receives partial unemployment benefits (on the theory that income should not fall below a stipulated level), that worker will nevertheless have taken from his wages a percentage for contributions.

Most employers who look at the insignificant sum coming from that source, who recognize what added record-keeping burdens it will entail, and who are aware that there will be a call from their workers for higher wages because their income has been reduced will be little inclined to foster the idea.

However, one must not get the idea that employees do not pay for a very substantial part of their own unemployment. Presuming that a worker is actually eligible for benefits, he suffers a total loss of wages (uncompensated) during the usual three or four weeks required as a waiting period. When benefits do come to him they never exceed (in the greater majority of all plans) fifty per cent of the normal full-time wage. When the benefits cease, due to the limits specified in the law, he again suffers total loss of income.

Under any circumstance, then, though he may not contribute directly to the fund, he himself carries more than fifty per cent of the loss due to his unemployment. It seems that such a burden should be considered sufficient to satisfy anybody. Furthermore, remuneration to employees is not generally conceded to be so high

that compulsory saving for an industrial rather than a personal risk should be inflicted upon them.

The psychology of employees' contributions is bad. "Experience has shown that there is never any difficulty in getting employees to understand that a fund, contributed by their employers at a fixed percentage on payroll, will not be able to stand unlimited drain, and that it is not fair to expect that it should do so. But . . . no amount of logical explanation can convince an employee that a fund to which he has been required—or even permitted—to contribute can with any justice be allowed to become inadequate to pay him full benefits in case he becomes unemployed." <sup>6</sup> It is almost inevitable that great political pressure would be brought upon the legislature to make an appropriation from the state treasury for the purpose of paying the benefits which the depleted pool could not pay.

#### *Unemployment Subject to Industrial Causes and Employment Policies*

In the reserve type of job insurance law the industrial nature of the hazard is admitted. It therefore puts the cost of unemployment benefits directly upon industry by requiring contributions from the employer alone.

But it goes further than that. The reserve type recognizes that some part of unemployment is due to the nature of the particular industry, but also (and to an appreciable degree) to the employment policy pursued by individual employers. It is common knowledge that there is considerable variation in the degree of stability even within the same industries.

It is therefore reasonable and eminently fair to require, to the extent to which unemployment with a particular employer is due to his bad business policy, that to that extent the employer, and he alone, should pay for his mismanagement as reflected in the liability for unemployment compensation. This the pooled fund does not do. On the other hand, to the extent to which unemployment grows out of the inherent nature of the business, to that extent all employers in that business will share and share alike the unemployment hazard, so that it will become (as it rightly should) a part of the cost of production. If the direct savings engendered by the greater degree of stability of employment do not equal or outweigh the small added cost which this payroll tax represents, then the consumer can rightfully be asked to pay the higher cost induced by it.

The consumers of goods or services made available in such a way

<sup>6</sup> Story, *op. cit.*

that a reservoir of labor is necessary, have no right to ask either society or other industries to subsidize the cost of production. This is parallel to the thought unequivocally contained in the reserve plan that any business of any kind, producing for profit, has, no more than any private citizen, the right to expect either society or other business to carry the losses attending the hazards which are essentially its own.

On this point Professor Slichter of Harvard has this to say:<sup>7</sup> “. . . providing against unemployment is merely sound cost accounting, and we shall not have accurate reliable industrial cost accounting until the cost of caring for the unemployed enters into the cost of producing goods directly, so that a manager can go to his board of directors and present a budget on cost-accounting principles. Industry requires a labor reserve because it uses more men at some times than at others. The cost of maintaining those men is just as much a cost of production, as far as an economist can see it, as paying interest and depreciation on idle machinery.”

One final quoted observation of Dr. Royal Meeker:<sup>8</sup> “It is a painful thought that nearly all employers are more or less parasitical in that they depend on seasonal or cyclical subsidies to maintain their workers and keep themselves in business.”

The reserve idea in job insurance squares directly with the well established American philosophy of reward for merit and penalty for blame in direct proportion to the merit or blame. No man really objects to carrying such responsibility as is justly his, but no clear-minded person will accept as an obligation that responsibility which belongs to another unless he is credited with doing more than justice—i.e., manifesting charity. The device by which job insurance is set up should not and may not be associated with charity in any way.

### *Administrative Procedure*

No law is better than its administration, regardless of what hope it may otherwise hold out. The probability of good administration is enhanced as the mechanisms of operation are simplified. In this respect the reserve type of law would appear to be preferable to the pool.

The idea of individual responsibility is an ancient principle well grounded in American tradition. Collective responsibility is too frequently akin to irresponsibility. Because the “reserve” conforms best to a native idea, in Wisconsin its advocates are more plentiful

<sup>7</sup> U. S. Senate *Hearings*, Comm. on Unemployment Insurance, p. 225 ff.

<sup>8</sup> Quoted in California Report, p. 73.

and its antagonists less numerous. Since good will is the finest asset anybody exercising authority can possess, this fact is worthy of note. Where the motive for proper response to a law is solely the fear of power, efficiency is well nigh impossible; being so, justice becomes ponderous and thereby even the noblest cause may find itself needlessly discredited.

The reserve type of law, for reasons previously given, does not readily associate itself with employee contributions. The pooled fund systems frequently require them. Without such contributions the employer's task of calculating and reporting his obligations is very simple. He merely totals his payroll for whatever pay-periods he is accustomed to use, claims such exclusions as may be allowed, and pays his dues accordingly. But where a percentage is taken from the workers' pay, an individual calculation must be made for each employee. Any payroll accountant can explain that this entails a lot of additional work. It is a fact, too, that the portion so deducted is usually so small that even though it should be considered it would hardly be worth the additional effort.

The Wisconsin reserve law makes it possible for any employer who desires it to operate under a plan of mutual contributions. The employer under such a plan could provide additional benefits or more extended benefits to his laid-off employees. Nevertheless, there has been little indication of interest in such a plan, due at least in part to the fact that what is now a simple procedure would then become an involved one.

The two types of law (reserve and pool) will most likely require rather distinct systems of administration for the purpose of paying benefits. In general it would appear that the safeguards which must be utilized to protect both the employers' and workers' interests would be less numerous under a reserve system. This is due to the fact that an employer has a direct financial incentive to discourage unwarranted benefit payments from his account. At the same time the working employee will be more inclined to resent benefit payments to any laid-off workers who through error or falsehood are depleting a fund which should protect him when he is laid off. A pool fund would very likely require a complete system of central records of all employees in the state. It would require each employer to periodically report the earnings record of all his employees—this regardless of the fact that all his employees worked full time.

In Wisconsin, where a reserve law is in operation, the employer is required to make a report on the employment and earnings record of

any employee only at such time as there is possible liability to pay benefits. Where employment is fairly steady and labor turnover is low, the necessity to submit this report rarely arises. It is true that a weekly "low or no earnings" report blank must be returned to the Unemployment Compensation Department each week, but unless some employees have for any reason earned less than their benefit rate, this report will contain no names. It will merely serve as an affirmation that no unemployment occurred in that week.

This minimum of reporting is deemed sufficient by virtue of the fact that each employer is required to give notice to each employee of what his benefit rate is. This same notification explains to the worker the conditions under which he has something coming. Thus the employee's knowledge of his rights serves to impel the employer to comply properly. At the same time the normal and periodic official audit (or special audit, if at any time deemed desirable) will serve to the same end. The likelihood that an employee will succeed if he attempts to malingering is dispelled by the fact that, as stated before, the employer will protest payment of benefits when he thinks they are not due. The penalty for willfully false claims will usually discourage attempts of this kind.

The actual payment of the unemployment compensation will be made by check sent to the home address of the eligible worker. However, this point cannot be reached until the displaced worker has served his normal three weeks (one such period in fifty-two weeks) total unemployment waiting period during which period he had to report at the public employment office if so instructed by the employer. Each week when the applicant reports he indicates what earnings, if any, he had in the week for which he is reporting. His employer gets a duplicate copy of all these reports. Should he detect an error or misrepresentation, he can notify the administrative department. On the other hand, when the employer submits a past employment and earnings record to the compensation department, the employee is given a copy so that he can check it for error or falsehood. When the check is mailed, after dispute of claim (if any) has been finally settled, the employer receives a duplicate of it. It tells him what weeks the payment is charged against. Any error can then be reported by him.

In general, then, the focal idea is to simplify and minimize the work involved as much as possible, while at the same time giving all parties concerned a complete record of any action related to the payment of, or refusal to pay, benefits.

We have taken much time already and questions will undoubtedly take some more, so we'll end now after this one additional observation: All that has been done to make this law operative has been thoroughly discussed, analyzed, debated, and approved by the Commission's advisory board. This is a group of men representing employers, labor, and the public. Though serving an uncompensated function, this body has spent days and weeks at a time, giving this aid and advice. My personal impression is that this real sacrifice and cooperation from all parties concerned is the finest commentary on our law. With its aid, the law has been simplified in its text, and made practical in its operation. We heartily recommend it to those who must administer unemployment compensation laws, regardless of the type.

Now, if there are any questions, I shall be glad to answer them.

CHAIRMAN MONROE: My personal reaction is that Mr. Rauch said plenty. However, he is willing to say more if you will ask the questions. The meeting is open for discussion.

C. H. TOWNS (*Partner, Loomis, Suffern & Fernald, New York, N. Y.*): In the case of an employee who has worked for Employer A for a year and then worked for Employer B for a year, and then becomes unemployed, from what fund does he get his benefits?

MR. RAUCH: In Wisconsin the last employer pays what compensation he owes (if any) before the employee can claim anything from the second last employer, etc. In this respect the Biblical prophecy is now fulfilled: "The last shall be first and the first shall be last."

In the case cited, Employer B alone would be called upon to pay compensation. The reason is that twenty-six weeks after the employee's last employment with A, he is no longer eligible for compensation from him. The presumption is, I suppose, that if the employee got along for six months immediately following in such fashion as not to be eligible from A, there is little likelihood of his being eligible in the more remote future. Besides, no unemployment compensation law of any type could possibly assume much greater liability than they now do. It can be expected to bridge the gap between successive jobs; it must be expected to encourage shortening that period, but it cannot reasonably carry the burden of those who for some reason cannot within a reasonable time, be returned to

remunerative labor. Our law limits the employee's benefit eligibility to the number of weeks of employment in the previous fifty-two with the employer. Where, therefore, an employee's benefit rate is ten dollars a week and his ratio of benefit week to weeks of employment is one to four, the maximum number of weeks for which benefits can be claimed is thirteen. The total maximum eligibility is \$130 in any case.

DR. CHARLES REITELL (*Staff Member, Stevenson, Jordan & Harrison, New York, N. Y.*): I would like to know what your regulations are regarding unemployment caused by strikes and lockouts, particularly of the innocent party.

MR. RAUCH: The provision there is a normal provision which you will find in all laws, which says that individuals who are unemployed as a result of a strike or lockout in the establishment are not eligible for unemployment benefits while that strike is in active progress.

DR. REITELL: Even if innocent?

MR. RAUCH: It makes no difference; if the unemployment is caused by a strike or lockout in the establishment, while that strike or lockout is in progress no benefits are payable.

On the other hand, there is a reasonable provision for the protection of labor. Most employers would not attempt to do the type of thing it guards against but some might, and it is there so it will not be abused. "Suitable employment" is defined so that you cannot force an employee to take work for which he is not reasonably fitted, which does not pay him at least as much as his benefit rate, or that does not give him the rate normally paid in the community for the type of work which he is expected to accept.

You cannot take an office man and require him to take a pick-and-shovel job. You cannot ask a man to do for twenty-five cents an hour a job that would normally pay in that community a wage of seventy-five cents an hour, and say that because he does not accept that twenty-five cents that he has refused suitable employment. You can readily see why such limitations must be provided.

E. H. SCHULTZ (*Assistant Controller, Carnation Co., Oconomowoc, Wis.*): Under this reserve plan, what happens when a company is dissolved?

MR. RAUCH: As under any other plan (any pool, for example), the employer's contributions are not returnable to him. It is gone, though perhaps not forgotten.

Under the original Wisconsin law, the balance in the fund after all benefits due were paid would be returned if an employer ceased to be subject or discontinued business. The requirement of the Social Security Act (Title IX) that "all money withdrawn from the Unemployment Trust Fund by the state agency shall be used solely in the payment of compensation . . ." was the immediate cause for the change. However, our employers were having difficulty with the Internal Revenue Department because they had claimed (many of them) such contributions as an item of expense. It was disallowed on the ground that it was really an asset, because it could be returned. Only actual benefit payments were allowed as expense. Since most employers hope to continue in business, and therefore would not be in position to use such an asset, they voiced little or no objection to the change.

At present, therefore, he not only claims the contributions as an item of expense for the purpose of filing his ordinary state and federal tax returns, but he also claims his contribution (up to ninety per cent of his tax) as an offset against the federal excise tax levied under Title IX of the Social Security Act. If it would be made possible to return contributions to the employer, he would owe the amount to the Internal Revenue Department because he had wrongly claimed it as an expense and an offset.

MR. SCHULTZ: May I cite just one instance? Our company purchased a smaller company. The original company was dissolved and a new company formed next day. Does the new company take over the reserve fund in such a case?

MR. RAUCH: If there is a legal "successor in interest" relationship between the old and the new company, then the new company holds the same position relative to this law as though no change had been made. On the other hand, if the new company is not a "successor in interest" to the old, when the benefit liability (if there is any) ceases to exist—which is twenty-six weeks after their last employment. At that time the balance in its account is credited to the "closed account" in the fund. Then the new company would be subject to make contributions on the same conditions that any employer is subject (as of the beginning of the year if he has eight

employees in eighteen weeks of the year), and would begin to pay benefits twenty-four months after it became subject. It can be seen that it is frequently to the advantage of a new company to be the "successor in interest" in order to get credit for the contributions standing to the credit of the old company.

F. J. HEINRITZ (*Chief Auditor, Farm Credit Administration, Louisville, Ky.*): As far as the individual workman is concerned, he is equally in need of unemployment protection whether he works in a plant that employs six or six hundred. What is the status of an employee in a comparatively small firm under the Wisconsin Act?

MR. RAUCH: I agree with that observation, and suggest that as soon as feasible existing laws should be amended so as to protect every worker regardless of the number on the payroll of the particular employer.

In Wisconsin the law requires every employer of eight or more in eighteen or more weeks of the year to be subject. It was not at this time deemed administratively feasible to include those below this limit. Poor official records as to who is an employer and how many persons he employs account for some of this reluctance to drop lower at this time.

However, the Wisconsin law has a significant provision which affects the small employer. In the first place, the employees of a contractor or subcontractor doing work for a principal employer, which work is in the normal line of business of the principal, are employees of the principal unless the subcontractor is himself subject to the law. This being true, many principals are refusing to do business with subcontractors unless these are themselves subject. In view of the fact that the law allows for "election" to be subject in case an employer is otherwise too small, this is a reasonable requirement. In effect, it causes many small employers to "elect" coverage.

IRVING JOSEPH STONE (*Office Manager, The Stone Grill Co., Columbus, Ohio*): You say that it is possible for an employer who does not have the required number of employees to "elect" to become subject?

MR. RAUCH: Yes. The answer to the last question explains why that is desirable. An employer not otherwise subject will become so for three years if he elects to come under. In addition to

the reasons already given for some small employers "electing" to be subject is this interesting one: A contractor working for a principal sometimes finds that principal willing to report for him even though it involves some bookkeeping because it helps to build up the principal's fund. That same reason induces some smaller employers to elect. They feel certain that the future will find them being subject by compulsion. If they elect now, there will be an account to their credit when that time arrives. However, if they permit the principal to report for them and pay him directly or have the proportionate amount deducted from the value of the job done, they have paid the money, but have nothing to show for it.

GLADYS BALLMAN (*Student, College of Mt. St. Joseph, Cincinnati, Ohio*): Will the state pool the individual reserve funds for investment purposes?

MR. RAUCH: Yes. As you know, the money is turned over to the trusteeship of the Federal Treasury, where it is invested as provided in the Social Security Act. The interest accruing is prorated by the Commission to the individual accounts. For investment purposes it is pooled; for contribution and benefit purposes it is not pooled.

D. RICHARDSON (*Asst. Secretary & Treasurer, Monroe Calculating Machine Co., Orange, N. J.*): What rights has an employee to benefits where the employer has not contributed to the fund?

MR. RAUCH: No rights if he is unemployed by an employer not liable under the law.

O. F. HAMMER (*District Manager, Felt & Tarrant Mfg. Co., Indianapolis, Ind.*): What is the status of an employee who has worked for an employer who is liable and who has an employment record showing six months of work with him?

MR. RAUCH: Presume an employer who has been liable to make contributions since July 1, 1934. His liability to pay benefits begins July 1, 1936, or after two years of build-up of the fund.

The weeks of employment either during or before the build-up period are not credited to a worker for benefit purposes. Therefore, if the six months (twenty-six weeks) you speak of were served during either of those periods, the employee has nothing coming. However, if it is served after the conclusion of the two-

year build-up period (in this case, after July 1, 1936), his weeks of benefit eligibility are in ratio to the period of employment. For example, if an employee is eligible to receive the ten dollars a week benefit, the applicable ratio is one to four. He can therefore receive benefits for six and one-half weeks (twenty-six divided by four), presuming he is and remains otherwise eligible. Under no circumstance do the weeks of employment for benefit purposes figure back beyond fifty-two weeks. At the ratio given above, the maximum amount of money receivable is \$130 (ten dollars per week for thirteen weeks).

EDDIS JOHNSON (*Chief Accountant, Kellogg Switchboard & Supply Co., Chicago, Ill.*): I would like to know, along with Mr. Schultz's question, what happens to the employer's reserve when the employer divides the company and makes two companies out of it?

MR. RAUCH: It retains an affiliate relationship recognized as such in the law. The fund remains as before, although if requested separate reporting may be allowed.

MR. JOHNSON: It seems to me eventually one of these companies might obtain the contributions of the other company, and the one company would not have any right at all in the reserve.

MR. RAUCH: Being one employer (affiliate), the employees of both companies would have an equal access to the one reserve. I do not know how your example applies, but as a practical matter a man can not impoverish himself by taking his money out of one pocket and putting it in the other.

LESTER JANES (*Controller, Fremont Canning Co., Fremont, Mich.*): Can employees who work temporarily claim unemployment benefits?

MR. RAUCH: For a while I was afraid this question would fail to appear. An employee working for an employer who is liable for benefits can collect these benefits in direct proportion (ratio), as explained before, to the length of service. The only possible limitation on temporary help is the possibility that "new" help is hired for the purpose. One who has not previously served the normal probationary period (four weeks) with the employer must serve it before eligibility begins. When this trial period is once served after the employer becomes subject to the law, it need never be served again.

While some of the pooled fund laws make special provision to disqualify "temporary" help from benefits, the Wisconsin reserve law pays benefits in ratio to weeks of employment regardless of whether the work is obviously and admittedly temporary.

G. R. PALMER (*Auditor, The Standard Register Co., Dayton, Ohio*): I have a question. In the case of a man, for example, who comes in to work in a candy factory from the farm, is that man eligible for benefits?

MR. RAUCH: If an individual is self-employed, he is not eligible for benefits. Now if you have a farmer working in a candy factory, he will very likely go back to the farm and continue his self-employment and that individual is not compensable. That is true under the pooled fund or the reserve. Self-employed persons are not compensable, just as students are not compensable for their work through vacation periods.

CHAIRMAN MONROE: I am sure we all enjoyed Mr. Rauch's talk. Unfortunately, our time is limited, and while we could devote the entire afternoon to each speaker our program does not allow that.

Our next speaker is going to talk to us about our jobs, what we do, what he has to do in Milwaukee. For the past nine years he has been connected with the largest manufacturer of excavating machinery in the world. At the present time he is Assistant to the Secretary and Controller. During the last two years he has lectured at the University of Wisconsin on the Wisconsin Unemployment Insurance Law, and for the last two semesters on the Federal Social Security Act.

I am very happy to present to you Mr. L. E. Zastrow.

## RECORD-KEEPING UNDER THE SOCIAL SECURITY ACT

L. E. ZASTROW

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THERE has been so much literature published on the Social Security Act and its administration that I feel like a little mole attempting to move a mountain in appearing before you this afternoon. Most of the literature and the comments that have been made,

however, have been of necessity quite general and, in the time allotted, I wish to confine myself to specific records that this law will force you to keep and why it is necessary to keep them. The unemployment section, as well as the old-age pension part of federal and state laws, divide record-keeping into two parts, namely: (1) for the payment of contributions or payroll tax, and (2) record-keeping for benefit payments.

Inasmuch as the federal law requires, before approval of a state law, that contributions be made for two years before benefits can begin, you will, unless you come under the Wisconsin Act, not be directly concerned with records pertaining to benefit payments for some time. Nevertheless, some of the information upon which benefits are based must be recorded as early as one year after contributions, and the records are so closely interwoven that it will be well to keep in mind the picture as a whole.

Before discussing individual records, let me, in a general way, refer to those portions of the various state unemployment compensation laws that make it necessary for all to seriously consider the adequacy of records in use or new installations. The clue to record-keeping will be found in the definitions and in the benefit requirements.

### *Payroll*

The first item to be considered is the definition of payroll. Practically all of the states follow the federal definition which excludes certain types of labor from payroll, but does not limit the amount of wages or salary on which the tax is computed. Wisconsin and New York limit the amount of wage or payroll tax base, the former excluding all salaries and wages of \$250 and over received in any month by an employee, whereas New York has a limitation of \$50 per week or \$2,600 per year. Massachusetts has a basis practically the same as New York. At the end of 1936, Wisconsin changes its definition to read the same as the federal law.

If the state law under which you are doing business has a defined payroll, as it is called, with a limitation on the amount of the tax base, records should enable determination of the amount an employee receives during the month for which the contribution or tax is made, in order to exclude wages or salaries that should not be included.

The first question to confront you is whether payrolls should be on a weekly, bi-weekly, semi-monthly, or monthly basis. One peculiarity of the various state laws is that contributions are on a calendar month basis of reporting, whereas benefit payments ask for earnings

of employees by the calendar week. I can see no good reason for making any change in the bi-weekly, semi-monthly or monthly methods of payroll payment, especially before benefit credits become effective. If you are contemplating a change at all, it would be better to make such a change as will enable you to obtain weekly earnings of employees. If the weekly payment basis is in use or contemplated, it is recommended that it be on a calendar week, rather than a fiscal week in order to conform to the state laws, because computations wherever made for weeks are always on a calendar week starting Sunday and ending Saturday.

A minimum number of changes are recommended during the first two years of operation of your particular state law, as it is quite likely that a number of amendments will be made which may have an effect on the methods of record-keeping. Those employers on a calendar week or bi-weekly basis will encounter some difficulty in making the monthly contribution reports. Your state commission will undoubtedly make provision to report those payroll periods ending within that calendar month for which the report is made, unless the law specifically mentions that contributions on weekly payrolls include weeks commencing in such calendar month. The law of the District of Columbia does.

#### *Full-Time Weekly Wage*

The second item is the definition of "full-time weekly wage" or "average weekly wage." Careful examination of your state law will reveal that it probably is something entirely different from what you expect. Briefly, the first is the "hourly rate of earnings" multiplied by the "prevailing hours per week," the product being a theoretical weekly wage rate or "full-time weekly wage," as it is called. The other is the total amount of wages received for a past set number of weeks, divided by the number of weeks in which those wages were received, the answer being the "average weekly wage." Those weeks in which the employee works less than a minimum number of hours set by law, usually thirty, are eliminated in computing the average. This latter definition, "average weekly wage," will force keeping of records on a weekly basis unless the state commissions are willing to allow computations of this average with semi-monthly or bi-weekly payrolls without insisting that every week's wage be shown by itself. As long as the hourly rate of earnings of an employee, and the number of hours worked, is known, computation of a weekly wage for those weeks having less than thirty hours can be made,

and deducted from total earnings, leaving only earnings for weeks of more than 30 hours. The rest is then a matter of looking at a calendar and dividing the wages by the number of weeks worked. The fact that a person may be on a piece-work or some other incentive basis may cause some fluctuation between the weeks themselves, but should make little or no difference in the total average.

### *Full-Time Weekly Hours*

The third item is the definition of "full-time weekly hours." This again is not what one might ordinarily expect, but rather an intricate computation. The first step necessary is to group the employees of a plant into various classes of similar work and similar hours, in many instances a departmental classification being the most desirable and equitable. Next you determine whether there is a majority of each class who have worked a standard number of hours in each pay period, and if not, then an average number of hours for the whole class is taken. This necessitates keeping a record of the actual number of hours every employee works, excluding only those on a fixed salary (of a week or more) or on a commission basis. The majority of standard or average hours are added together for the year, taking only those weeks or pay periods above a certain minimum defined by law, usually thirty or forty hours per week, and dividing by the number of weeks or pay periods used, the resultant answer being the "full-time hours" per week applying to that particular class for which the computation is made. Any employee falling within that class will have these standard hours whether he worked them or not.

### *Hourly Rate of Earnings*

The fourth definition is that of "hourly rate of earnings," and this involves some effort also, although not quite as complicated as the other two. Very briefly stated, it is the amount of wages received, divided by the number of hours worked for those wages. Again let me emphasize that it is very necessary to record the actual hours an employee works. Piece-workers and employees on some form of incentive will come into this category as well as the regular hourly rated employees. The difficult thing about this computation is the minimum number of hours of work by an individual employee, which the various state laws require in the use of this computation. It ranges from at least 100 hours, as given in the Wisconsin law, to 300 hours in the Alabama law.

*Weeks and/or Days of Employment*

The fifth definition which must be considered is "weeks of employment." While this does not involve any intricate computation, nevertheless it presents some difficulties. Again the state laws vary considerably, Wisconsin defining a "week of employment" as any work performed without specifying any number of maximum or minimum hours, and Massachusetts defining it as "any work performed not less than 80% of weekly full-time hours or wage." Some states include weeks in which an employee is partially unemployed while others do not, and Indiana specifies "a plurality of total hours after December 31, 1936." Therefore, it will be necessary to know how much time an employee puts in, and how this compares with your particular state law. Some states even go to the extent of defining "days of employment," Massachusetts counting a half day or more as a full day. New Hampshire and New York have this definition in their law also.

*Partial Unemployment*

The sixth definition that I wish to bring to your especial attention is that of "partial unemployment." Inasmuch as any employee in your particular business establishment may be affected by it, the problem is acute. Like the other definitions, there is variation between the various states in the application of it. In general, an employee is partially unemployed if the wages he receives are less than his weekly benefit rate. Some states have added \$1.00 to it, so as to read, "fails to earn \$1 00 more than the weekly benefit rate." The District of Columbia and some other states have added \$2.00 and the state of Mississippi defines it "if the wages fail to equal 120% of weekly benefit rate for total unemployment." The intention of "partial unemployment" benefits is obviously to make it unprofitable for employers to cut down weekly hours, but it would seem to me that administration would be simplified if a further clause be added to the laws reading substantially as follows: "provided he has worked less than 50% of full-time weekly hours." This would simplify the determination of partial unemployment, because once the full-time hours for a particular employee are known, all the employer would have to do is to give him work at least half of that time. A chart showing the minimum number of hours an employee can work can then be easily prepared and would afford an easy method of labor control when it comes to seasonal let-down, and

shorter weekly hours become necessary. While ordinarily partial unemployment exists when the number of hours are reduced, employees on a piece-work basis could work all week and still be partially unemployed if they loafed on the job to such an extent that their wages received were less than the weekly benefit rate for total unemployment.

This concludes the comments on the definitions. Of course, there are others that should command attention, such as "total unemployment," "waiting period," "eligibility," etc., etc., but they will not have the effect on record-keeping of those previously mentioned.

#### INDIVIDUAL RECORDS

The individual records that an employer should keep are recommended as follows:

- Application for Employment
- Employee's History Record
- Employee's Central File
- In and Out Clock Card—Exhibit 1
- Payroll Sheet—Exhibit 2
- Payroll Summary—Departmental—Exhibit 3
- Employee's Earning Record—Exhibit 4
- Absentee or Lost Time Record—Exhibit 5
- Termination of Employment or Separation Notice
- Departmental Lay-off Record—Exhibit 6
- Chart for Short-time Weekly Hours—Exhibit 7
- Unemployment Benefit Claim—Exhibit 8

In many instances the first two of these forms can be combined, depending on the size of the company and the number of persons employed. Where a large number of applicants are interviewed and few persons hired, the personnel manager may not require complete information until the final interview. In such cases the first mentioned form will have only the minimum information required to make an intelligent selection.

Any form of application blank will usually suffice, as long as it has the following essentials shown on it: Name, address, age, sex, occupation, previous employment, date started to work. Provision should also be made for employee registration or serial number, both state and federal, as it will be necessary for benefit claim purposes and for federal old-age annuity when that law becomes operative next year.

The state of New Hampshire has prescribed a form on which it requires employers to report all new employees. I believe, however, that this form is not suited for the larger business concerns, because it does not contain sufficient information.

### *Employee's Central File*

It is suggested that one department be delegated to keep a central file for every employee wherein all important information pertaining to him is kept. Preferably the personnel department or employment department should be responsible for this record. It can be kept by alphabetical arrangement or by registration or serial number if such a plan is in operation. It might be well to start a file of this kind as of the first day of January, 1937, when the old-age pension law takes effect, or even the first of July, including all persons on the payrolls. The file should contain only important data and also a summarized record of earnings. It should be the one place where a complete history of an employee can be obtained. The ordinary standard manila folder, 8½ x 11 inches in size, with the number or name of the employee on it ought to be sufficient.

### *In and Out Clock Card*

Exhibit 1 shows one form of "In and Out" clock card. The importance of this simple record has been overlooked by a large number of employers and emphasis on the desirability of maintaining this form or similar type of time record is opportune. It will be the final proof whenever a benefit claim is disputed, when a question arises as to whether or not an employee was working in a particular week or day, and also on the question of what day of the week connections were severed. It will play an important part in determining whether or not there was partial unemployment. In addition to the usual provision for the recording of starting and quitting time, there is a column for the extension of the total hours worked for each day, and in case additional compensation in addition to the regular rate is paid, such as time and one-half for overtime, a column is provided for such excess over the actual hours worked, and is called overtime excess. Such additional allowance may have been, in the past, added to the actual hours worked and the pay computed on the total pay hours. This practice will prove detrimental as employers will be called upon to furnish the *actual* hours an employee works. This is necessary both in the computation of "hourly rate of earnings" and "full-time hours per week." It is therefore of

No.

Exhibit 1PAY PERIOD ENDING  
**June 15 1936****1000**

NAME

**G 1****John Jones**

Immediately following omitted registration, unrecorded time, absent service or absence for which payment is claimed the timekeeper will present this card to the foreman who will classify and recommend payment or deduction by entering this code in ink opposite the respective dates. Enter total time for the day in last column. At the end of pay period sign and pass card to Premium Dept.

A SICKNESS  
B SPEC. PERMISSION  
C VACATION  
D TARDY  
E OMITTED REGISTRATION

F CO. BUSINESS ON ORDER #  
G PERSONAL BUSINESS  
H SPECIAL AS NOTED HEREON  
P PAY  
N.P. DO NOT PAY

Recommended		Approved		Approved		Approved					
Date	IN	OUT	IN	OUT	IN	OUT	IN		O.E.	Total	
16											
17	E 7 51	E 12 01	E 12 54	E 5 04						8	
18	E 7 57	E 12 02	E 12 57	E 5 04						8	
19	E 7 54	E 12 08	E 12 55	E 5 04						8	
20	E 7 51	E 12 04	E 12 54	E 5 03						8	
21	E 7 53	E 12 04	E 12 54	E 5 05						8	
22	E 7 53	E 12 02								4	
23											
24	E 7 56	E 12 02	E 12 56	E 5 01	E 5 59	E 8 02			10	10	
25	E 7 52	E 12 02	E 12 58	E 5 02	E 5 58	E 8 03			10	10	
26	E 7 52	E 12 01	E 12 56	E 5 04						8	
27	E 7 56	E 12 03	E 12 56	E 5 02						8	
28	E 7 57	E 12 02	E 12 57	E 5 03						8	
29	E 7 55	E 12 03								4	
30											
31	E 7 57	E 12 02	E 12 56	E 5 00						8	
ACTUAL HOURS		10 00									
OVERTIME EXCESS		2 2									
PREMIUM HOURS		9 2									
TOTAL PAY HOURS		11 12						RATE 50.		TOTAL PAY 55.60.	

paramount importance to keep a record of the actual hours worked for each employee, with the exception of those on a definite weekly or monthly salary basis. At the bottom of the card, space is given for the summarizing of the number of hours worked, overtime excess, and incentive hours, this latter information being taken from production records of individual men kept for that purpose. The clock cards are then rated, the total pay is figured and the amount inserted in the spaces provided therefor. The total computation is then carried to the payroll sheet.

The top of the card contains instructions for recording information when the workman is at home ill, tardy, or forgets to punch the clock, and is shown by symbols being written on the line where such happenings occur. For instance, AP placed on a line would indicate that the employee was absent because of sickness and is to be paid for the absent time. If the symbol is ANP, it means that the employee was sick and was *not* to be paid for the time absent.

This card, after it has been figured, can serve as a very useful Employee's Earning Record. By filing the cards according to men all of the cards for a certain man will be in one place. If so desired they can be filed by registration or serial number. It is usually undesirable to file them by clock number because of transfers from one department to another and the consequent frequent changing of the clock number. It will be necessary to take a long-time view of any filing of records because you may be called upon to produce them for some pay period in the long distant past.

### *Payroll Sheet*

Attention is particularly invited to those columns of the payroll sheet (Exhibit 2) providing for "actual hours worked," "overtime allowance," "incentive hours," "total hours paid for," "number of units" (if on a piece-work basis), "total units paid for," and "total amount of pay." The remaining information is that usually shown on most payrolls. One column that will of necessity appear on all payrolls is that of "actual hours worked." This will be required in the computation of "hourly rate of earnings" and also "full-time hours per week." Furthermore, under the Massachusetts law a "week of employment" must consist of 80% of the "full-time hours per week." This column will also be of material assistance in checking for partial unemployment, because any employee who works less than standard number of hours should be investigated as to the

# SOCIAL SECURITY ADMINISTRATION

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## PAY ROLL RECORD

L. E. Zastrow, C. P. A.

L. E. Zastrow, C. P. A.			DEPT 3072-1										PAY PERIOD ENDING				
Clock Number	Name of Employee and Registration Number	Rate	Actual Hours Worked For OT	Incentive Hours	Total Pay Hours		Piece Work		Total Wage for period	Social Security Pay Roll Exclusions			Deductions from Pay			Net amount of Pay	
					Hours	Amount	Units	Amount		State	Federal	U C	State	Federal	Other	Amount of check	Check Number
1	A-1 John Jones 1000	.60	68.0		16.4	88.4	43.20		43.20				22	43	1.40	41.15	900 1
2	A-2 Fred Jones 1001	.60	84.0		5.5	89.5	44.75	65	13.20	87.95			29	58	1.30	56.78	901 2
3	A-3 John Martin 1002	.60	96.0		13.8	109.8	64.90			64.90			27	55	1.40	62.68	902 3
4	A-4 Robert Roe 1003	.60	88.0		7.1	95.1	47.55	72	14.40	61.95			31	62	1.30	59.72	903 4
5	A-5 John Doe 1004	.60	66.0		10.9	66.9	33.45			33.45			17	33	1.40	31.65	904 5
6	A-6 Fred Allen 1005	.60	88.0			88.0	44.00	109	21.80	65.80			33	66	1.30	63.51	905 6
7	A-18 Robert Brooks 1006	.60	96.0	4.0	15.5	115.5	67.75			67.75			29	58	1.30	55.68	906 7
8																	8
9	NOTE																9
10	In those states requiring number of																10
11	days worked, an additional																11
12	column entitled "Days Worked"																12
13	should be placed immediately																13
14	preceding																14
15	*Actual Hours Worked																15
16																	16
17																	17
18																	18
19																	19
20																	20
21																	21
22																	22
23																	23
24																	24
25																	25
TOTAL			2126.0	78.5	459.5	2663.0	1308.32	826	166.40								26

Exhibit 2

cause of absence or checked with the absentee record, a description of which follows later.

The next column, "allowed hours for overtime" or "overtime allowance," is for the additional amount paid under an arrangement where employees are paid double time or time and one-half for overtime. As stated previously you should never include such extra allowance with actual hours worked, because employers will be called upon to classify employees of similar hours worked in determining "full-time hours per week."

Incentive hours should be shown separately for the same reason, and the next column is provided for this purpose.

Under the state and federal unemployment and old-age annuity laws, certain items are excluded in the computation of the tax or contribution, and the next two columns are given for this purpose. By deducting these exclusions from the total of the payroll the tax base is easily arrived at. These exclusions can be listed on a separate schedule and then deducted from the total payroll in making up the contribution or tax report, although this is not as convenient as the column. In case there is more than one type of exclusion it can be identified by the use of a symbol and a summary analysis made at the bottom for each department, or at the end of the payroll, whichever is desired.

There are a few states which require "days of employment," notably New York and New Hampshire. Benefit credits in New York state are based on days of employment instead of weeks of employment, 15 days of employment for one week of benefits being the ratio on which they are allowed. A column can be inserted immediately preceding "actual hours worked" to record this.

The deductions are inserted manually. The reason for this is that this work is done in the lull between pay periods and thereby avoids peak loading. They can, however, be inserted mechanically, although this procedure promises to be somewhat difficult when deductions are made such as unemployment contributions by employees and old-age contributions under the federal law.

### *Departmental Summary*

A summary by departments is shown in Exhibit 3. The columns are exactly the same as the individual payroll sheets, except that number of employees have been added in a separate column. While this is not necessary, it is very desirable. The Indiana law requires this information on the present contribution reports. This summary

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## PAY ROLL RECORD

L. E. Gastrow, C. P. A.

DEPARTMENT

PAY PERIOD ending

Clock Number	Name of Employee and Registration Number	Number of Men	Actual Hours Worked	Allowed Hours for OT	Incentive Hours	Total Pay Hours	Basic Pay Amount	Piece Work Units	Total Wage for period	Social Security Payroll Exclusion	Reductions from Pay	Net amount of Pay				
										State	Federal	Un. C. B.	Other	Amount of Check	Check Number	
1	Department A	24	2125 0	78 5	459 5	2663 0	1593 32	826	165 46	1598 72		7.80	15.69	34 90	1500 43	1
2	Department B															2
3	Department C															3
4	Department D															4
5																5
6	NOTE															6
7	In times states re-															7
8	quitting number of															8
9	days worked ended															9
10	additional column en-															10
11	titled "Days Worked"															11
12	should be placed in															12
13	medically preceding															13
14	"Actual Hours Worked"															14
15																15
16																16
17																17
18																18
19																19
20																20
21																21
22																22
23																23
24																24
25																25
	TOTAL															

EXHIBIT 3

serves a very useful purpose for management control. If a considerable amount of overtime allowance appears, then production is not planned efficiently, or the personnel is under-manned. Likewise, if the percentage of incentive hours to actual hours drops, or is not up to standard in a certain department, then some man or even the whole department is not meeting the standard incentive set up. Therefore, this summary meets not only the needs of the social security program, but also can be made a useful tool of management.

### *Individual Employee's Earning Record*

Some record of this kind will be absolutely necessary. All employers have kept some sort of a record in the past for reporting earnings of employees for state and federal income tax purposes. This record should provide in columnar form the following: payroll period, actual hours worked during each pay period, additional time allowed for overtime work commented on in a preceding caption, any bonus, premium, or incentive wage for exceptional work performed under wage incentive methods, total pay hours (the sum of the preceding three columns), number of units or pieces (if there is such a basis involved), and the pay therefore, and the amount of total earnings for the pay period. (See Exhibit 4.) Another column is made necessary by the old-age pension section of the Social Security Act. The tax under this portion of the act is limited to the first \$3,000.00 of earned salary or wages, and therefore some means should be provided for determining the yearly earnings to date. This can be done by insertion of a column for that purpose, as shown at the extreme right of the sheet, or by the use of sub-totals, whichever is desirable from the viewpoint of the individual employer.

The top of the form contains in addition to the usual information which is self-explanatory and not commented upon, space for the average hourly earning rate. This is necessary because employers are required to know in advance the weekly rate for all employees in order that partial unemployment may be determined when the employee earns less than his benefit rate for total unemployment.

The reverse side of the form can be used for recording deductions from pay, the same number of lines being provided for as on the front.

This form is designed for semi-monthly payrolls, but can be used for monthly, bi-weekly and weekly payroll periods. When desired for weekly payrolls both sides of the form can be printed and a

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## EMPLOYEE'S EARNING RECORD

Name \_\_\_\_\_ Clock No. \_\_\_\_\_ Fed. Reg. No. \_\_\_\_\_  
 Address \_\_\_\_\_ State Reg. No. \_\_\_\_\_  
 Hourly rate \_\_\_\_\_ Average or Full-time \_\_\_\_\_ Weekly \_\_\_\_\_  
 of earnings \_\_\_\_\_ weekly wage \_\_\_\_\_ benefit rate \_\_\_\_\_  
 Date Hired \_\_\_\_\_ Date left \_\_\_\_\_ Date reaches \_\_\_\_\_  
 Reason for leaving \_\_\_\_\_ age 65 \_\_\_\_\_  
 Unempl. \_\_\_\_\_  
 claim No. \_\_\_\_\_  
 Remarks \_\_\_\_\_

Pay Roll Period	Actual Hours Worked	Allowed Hours For OT	Incentive Hours	Total Pay Hours	Hours	Amount	Piece Work Hours	Amount	Total wage for period	Earnings year to date
1 Jan 15	68.0		18.4	86.4	43.20				43.20	
2 31	84.0		5.5	89.5	44.75		65	13.20	57.95	101.15
3 Feb 15	96.0		3.8	109.8	54.90				54.90	156.05
4 29	88.0		7.1	95.1	47.55		72	14.40	61.95	218.00
5 Mar 15	56.0		10.9	66.9	33.45				33.45	251.45
6 31	88.0			88.0	44.00		109	21.80	65.80	317.25
7 Apr 15	76.0		21.0	97.0	48.50				48.50	365.75
8 30	96.0	4.0	15.5	115.5	57.75				57.75	423.50
9 May 15	97.0	4.5	29.9	131.4	65.70				65.70	502.80
10 31	96.0	4.0	3.0	103.0	51.50		150	30.00	81.50	584.30
11 Jun 15	96.0	4.0	51.6	151.6	75.80				75.80	660.10
12 30	88.0	4.0	2.3	94.3	47.15		130	26.00	73.15	733.25
13 Jul 15	100.0	10.0	30.7	140.7	70.35				70.35	803.60
14 31	80.0		13.2	93.2	46.60		40	8.00	54.60	858.20
15 Aug 15	48.0	4.0	18.9	70.9	35.45				35.45	893.65
16 31	117.0	8.0	7.9	132.9	66.45		85	17.00	83.45	977.10
17 Sep 15	104.0	12.0	16.0	132.0	66.00				66.00	1043.10
18 30	108.0	10.0	13.9	135.9	67.95				67.95	1111.05
19 Oct 15	84.0	4.0	53.1	141.1	70.55				70.55	1181.60
20 31	96.0	4.0	2.7	102.7	51.35		90	18.00	69.35	1250.95
21 Nov 15	80.0		78.9	158.9	79.45				79.45	1330.40
22 30	100.0	6.0	7.7	113.7	56.85		85	17.00	73.85	1404.25
23 Dec 15	96.0		23.9	119.9	59.95				59.95	1464.20
24 31	88.0		13.6	101.6	50.80				50.80	1515.00
25										
26										
Totals	2125.0	78.5	454.5	2663.0	1331.50		826	165.40	1496.90	1558.70

## DEDUCTIONS FROM PAY ROLL (On reverse side of form)

Pay Roll Period	Old Age Ben.	Unempl. Comp.	Local Comm. Fund	Sick Ben. Dues				Other Author. Deduct.	Total for Period
1 Jan 15	43	22	25	.65				.50	2.05
2 31	58	29						1.30	2.17
3 Feb 15	55	27	25	.65				.50	2.22
4 29	62	21						1.30	2.23
5 Mar 15	33	17	25	.65				.50	1.90
6 31	66	33						1.30	2.24

Exhibit 4

Size of Form 7" wide by 10" long.

separate deduction record also printed. The size of the form is dependant on the employers' needs and also whether mechanical office equipment is used in the preparation. For hand posting, an  $8\frac{1}{2} \times 11$  sheet will be advantageous. Only one year is shown on a sheet and this will be found very convenient when it comes to discarding old files.

### *Absentee or Lost Time Record*

The next form suggested will, no doubt, cause considerable comment. In the past, when an employee was absent of his own accord, the absent time was not paid for and that was the end of it. No record as to the cause of absence was maintained unless the personnel department or other interested parties made investigation in special cases. The partial unemployment benefit provision of the Unemployment Compensation Acts will not only force employers to keep a record of absence, but also the reason for such absence. Visualize for a moment what will happen when a dispute arises between the employee and employer on the question of partial unemployment. If the employee claims he was sent home because there was no work, he is partially unemployed, but if the employer says that the employee was at home because he was ill, and was unable to work, the employee is not partially unemployed and should receive no partial unemployment benefit. But how can the employer prove that the employee was home sick if no record of such illness was kept.

The form shown as Exhibit 5 is on a weekly basis and should be filled out every Monday morning for all employees absent during any part of the preceding week. Obviously the days absent will be obtained from the "In and Out" card, the procedure being so arranged that the cards be scrutinized every Monday. This record can be the starting point for partial unemployment claims. (Under the Wisconsin law, as amended, it now becomes the duty of the employer to initiate partial unemployment claims.) However, if it is burdensome to record all of the absence because there is so much of it, only those who are absent for more than 50% of their "full-time" hours need be recorded, especially so in all establishments which pay on a straight hourly basis.

If partial unemployment is on a different basis than Wisconsin, obviously absent time must be recorded to fit the law of that particular state. Particular attention is invited to the space for the signature of the employee. Future arguments can be avoided by having this record signed as to the reason for the absence. There

may be some objections on the part of the employee to signing, but these can be gracefully overcome by the assurance that the record is purely for the purpose of avoiding controversy. The "good" employee will not object and the "poor" workman should be controlled because in all likelihood he will be the first to cause trouble. In case objections are too strenuous, then the signature of the fore-

Name _____	Clock No. _____					
The above named employee was absent from work _____ days during week ending Saturday _____ as follows and for the reason stated below:						
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<div style="font-size: 1.2em; font-weight: bold; margin: 0;">Exhibit 5</div>						
I hereby certify that the reason for absence given above is correct.						FOREMAN _____
Date	193 _____					
EMPLOYEE _____						

man should be accepted and the reverse side should carry a notation of the employee's refusal to sign.

This record can be eliminated if the reason for the absence is shown on the "In and Out" card. Suitable space for the employee's signature on the "In and Out" card can easily be provided for, either on the bottom of the card or on the reverse side.

### *Termination of Employment Notice*

The State Commissions will undoubtedly require a form of this kind, as this will be the starting point of a claim for total unemployment. The Commissions will probably design the form to be used in order to obtain the required information in the manner best suited to their needs. The only comment offered is that the form should be prepared in quadruplicate, one copy to the Commission, duplicate to the local free employment office, triplicate to the employer, and the last copy to the employee. This notice should also be signed by the employee before he leaves the employer. California

has a notice in use by order of its Commission and the District of Columbia provides a termination notice also. The state of Oregon calls for complete information on an employee, showing in detail by weeks, hours worked, weeks of employment and wages earned for past 104 weeks prior to an employee's lay-off.

### *Departmental Benefit Liability Record*

It will be found very desirable to have this form (Exhibit 6) filled out for all employees who are laid off, as a check on the foreman, showing him what it will cost to dismiss employees under unemployment compensation laws. This form can be used during the current years, even though no benefits are payable, in order to give the management definite information and a picture as to the benefit liability when this part of the law takes effect. To get the full effect, it is suggested that in using this form, you assume that the benefit provisions of the law are in full force, and do not give consideration to the fact that the liability is limited during the first year because the "weeks of employment" do not start until sometime after contributions. This provision varies with state laws.

This completes the explanation of the forms. Now to proceed with the illustration that it is not necessary to have weekly payroll records or to even know the exact amount of an employee's earnings by weeks, in order to determine the amount of a benefit claim for either partial or total unemployment or both. It is the provision for benefits for partial unemployment that causes the confusion and difficulty, and the official definition as given in the Wisconsin law at 108.02 (q) is repeated for an examination and clearer understanding. It reads: "*Partial Unemployment.* An employee shall be deemed 'partially unemployed,' with reference to any given employer, in any week of employment by such employer for which he receives wages (from any and all employers, but exclusive of "odd-job" earnings) equalling less than his weekly benefit rate from the given employer."

Inasmuch as the weekly benefit rate is 50% of the "full-time weekly wage," with certain defined maximums, and the "full-time weekly wage" is determined by multiplying the "hourly rate of earnings" by the "full-time weekly hours" applicable to such employee, the entire problem resolves itself into whether the employee worked approximately 50% of his normal or "full-time weekly hours." If the employee did work 50% or more of his normal or "full-time weekly hours," there is no "partial unemployment."



Therefore, unless the employer is working his plant "short hours," there is no necessity of keeping a record of *weekly earnings* for all employees. It may possibly be needed for a small number of employees but these can be determined in another manner very easily.

The Wisconsin Industrial Commission adopted a rule whereby an "hourly rate of earnings" can be established in advance for a fixed period for all employees. For instance, the total number of hours worked, divided into the total amount earned for the first three months of this year, will for a certain employee, be the "hourly rate of earnings" to be used during the balance of the calendar year. This is an excellent rule as it simplifies administration. Employers will then have a definite procedure and can determine in advance of any partial or total unemployment the "full-time weekly wage" and the "weekly benefit rate." By the use of a chart such as shown as Exhibit 7 in conjunction with the "In and Out" card, "partial unemployment" can be very readily ascertained. For example, assume that the employee had only worked two days, Monday and Tuesday, and then had been sent home for the balance of the week on account of slack work in his department, giving him only a total of 16 hours for the week. The employee's "hourly rate of earnings" is previously determined by dividing the total amount earned for the first quarter by the total hours worked (\$317.25 divided by 480 equals 66.1 cents). The chart shows that persons having an "hourly rate of earnings" should work a minimum of 19 hours per week before incurring benefit liability for partial unemployment, if the employee works on a 40-hour week basis. On a 50-hour week basis the minimum would be 23 hours. The employee in question was partially unemployed, because he worked only 16 hours.

There is, however, really no necessity for calculating the "hourly rate of earnings" for all employees until benefit liability is incurred for either or both partial or total unemployment. Proper space can be provided for this information on the initial report of an employer whenever a claim for benefits is made, and on the claim blank itself. It is conceivable that an employer may calculate the rates for 1,000 employees and unless there is unemployment attributable to the employer, not a single rate would be required. I know of a company that has a very irregular schedule of hours, but would have had only one case of partial unemployment for the entire first quarter of this year, had the benefit provisions of the law been in effect. The absentee record, previously referred to, was put into operation by this company six months in advance, so the foremen and employees

# SOCIAL SECURITY ADMINISTRATION

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## UNEMPLOYMENT COMPENSATION CHART OF MINIMUM HOURS OF WORK WITHOUT INCURRING BENEFIT LIABILITY FOR PARTIAL UNEMPLOYMENT (WISCONSIN LAW)

	40 HOUR WEEK				44 HOUR WEEK				45 HOUR WEEK				50 HOUR WEEK			
Hours Earn- ing Rate	Full- time weekly wage	Weekly Benefit Rate	Min- imum weekly hours	Full- time weekly wage	Weekly Benefit Rate	Min- imum weekly hours	Full- time weekly wage	Weekly Benefit Rate	Min- imum weekly hours	Full- time weekly wage	Weekly Benefit Rate	Min- imum weekly hours	Full- time weekly wage	Weekly Benefit Rate	Min- imum weekly hours	Full- time weekly wage
40	16.00	8.00	20	17.60	8.80	22	18.00	9.00	22.5	19.00	9.50	23	20.00	10.00	25	
41	16.40	8.20	20	18.04	9.02	22	18.45	9.225	23	19.50	9.75	23.5	20.50	10.25	25	
42	16.80	8.40	20	18.48	9.24	22	18.90	9.45	23.5	20.00	10.00	24	21.00	10.50	25	
43	17.20	8.60	20	18.92	9.46	22	19.35	9.675	23.5	20.50	10.25	24	21.50	10.75	25	
44	17.60	8.80	20	19.36	9.68	22	19.80	9.90	23.5	21.00	10.50	25	22.00	11.00	25	
45	18.00	9.00	20	19.80	9.90	22	20.25	10.125	23.5	21.50	10.75	25	22.50	11.25	25	
46	18.40	9.20	20	20.24	10.12	22	20.70	10.35	23.5	22.00	11.00	25	23.00	11.50	25	
47	18.80	9.40	20	20.68	10.34	22	21.15	10.575	23.5	22.50	11.25	25	23.50	11.75	25	
48	19.20	9.60	20	21.12	10.56	22	21.60	10.80	23.5	23.00	11.50	25	24.00	12.00	25	
49	19.60	9.80	20	21.56	10.78	22	22.05	11.025	23.5	23.50	11.75	25	24.50	12.25	25	
50	20.00	10.00	20	22.00	11.00	22	22.50	11.25	23.5	24.00	12.00	25	25.00	12.50	25	
51	20.40	10.20	20	22.44	11.22	22	22.95	11.475	23.5	24.50	12.25	25	25.50	12.75	25	
52	20.80	10.40	20	22.88	11.44	22	23.40	11.70	23.5	25.00	12.50	25	26.00	13.00	25	
53	21.20	10.60	19	23.32	11.66	20	23.85	11.925	23	25.50	12.75	24	26.50	13.25	24	
54	21.60	10.80	19	23.76	11.88	20	24.30	12.15	23	26.00	13.00	24	27.00	13.50	24	
55	22.00	11.00	19	24.20	12.10	19	24.75	12.375	23	26.50	13.25	24	27.50	13.75	24	
56	22.40	11.20	18	24.64	12.32	19	25.20	12.60	22.5	27.00	13.50	23	28.00	14.00	23	
57	22.80	11.40	18	25.08	12.54	19	25.65	12.825	22.5	27.50	13.75	23	28.50	14.25	23	
58	23.20	11.60	18	25.52	12.76	19	26.10	13.05	22.5	28.00	14.00	23	29.00	14.50	23	
59	23.60	11.80	17	25.96	12.98	18	26.55	13.275	22	28.50	14.25	22	29.50	14.75	22	
60	24.00	12.00	17	26.40	13.20	18	27.00	13.50	22	29.00	14.50	22	30.00	15.00	22	
61	24.40	12.20	17	26.84	13.42	18	27.45	13.725	22	29.50	14.75	22	30.50	15.25	22	
62	24.80	12.40	17	27.28	13.64	18	27.90	13.95	22	30.00	15.00	22	31.00	15.50	22	
63	25.20	12.60	16	27.72	13.86	17	28.35	14.175	21	30.50	15.25	21	31.50	15.75	21	
64	25.60	12.80	16	28.16	14.08	17	28.80	14.40	21	31.00	15.50	21	32.00	16.00	21	
65	26.00	13.00	16	28.60	14.30	17	29.25	14.625	21	31.50	15.75	21	32.50	16.25	21	
66	26.40	13.20	15	29.04	14.52	16	29.70	14.85	20	32.00	16.00	20	33.00	16.50	20	
67	26.80	13.40	15	29.48	14.74	16	30.15	15.075	20	32.50	16.25	20	33.50	16.75	20	
68	27.20	13.60	15	29.92	14.96	15	30.60	15.30	20	33.00	16.50	20	34.00	17.00	20	
69	27.60	13.80	14	30.36	15.18	15	31.05	15.525	19	33.50	16.75	19	34.50	17.25	19	
70	28.00	14.00	14	30.80	15.40	14	31.50	15.75	19	34.00	17.00	19	35.00	17.50	19	
71	28.40	14.20	14	31.24	15.62	14	31.95	15.975	19	34.50	17.25	19	35.50	17.75	19	
72	28.80	14.40	13	31.68	15.84	13	32.40	16.20	18	35.00	17.50	18	36.00	18.00	18	
73	29.20	14.60	13	32.12	16.06	13	32.85	16.425	18	35.50	17.75	18	36.50	18.25	18	
74	29.60	14.80	13	32.56	16.28	13	33.30	16.65	18	36.00	18.00	18	37.00	18.50	18	
75	30.00	15.00	12	33.00	16.50	12	33.75	16.875	17	36.50	18.25	17	37.50	18.75	17	
76	30.40	15.20	12	33.44	16.72	12	34.20	17.10	17	37.00	18.50	17	38.00	19.00	17	
77	30.80	15.40	12	33.88	16.94	12	34.65	17.325	17	37.50	18.75	17	38.50	19.25	17	
78	31.20	15.60	11	34.32	17.16	11	35.10	17.55	16	38.00	19.00	16	39.00	19.50	16	
79	31.60	15.80	11	34.76	17.38	11	35.55	17.775	16	38.50	19.25	16	39.50	19.75	16	
80	32.00	16.00	11	35.20	17.60	11	36.00	18.00	16	39.00	19.50	16	40.00	20.00	16	
81	32.40	16.20	10	35.64	17.82	10	36.45	18.225	15	39.50	19.75	15	40.50	20.25	15	
82	32.80	16.40	10	36.08	18.04	10	36.90	18.45	15	40.00	20.00	15	41.00	20.50	15	
83	33.20	16.60	10	36.52	18.26	10	37.35	18.675	15	40.50	20.25	15	41.50	20.75	15	
84	33.60	16.80	9	36.96	18.48	9	37.80	18.90	14	41.00	20.50	14	42.00	21.00	14	
85	34.00	17.00	9	37.40	18.70	9	38.25	19.125	14	41.50	20.75	14	42.50	21.25	14	
86	34.40	17.20	9	37.84	18.92	9	38.70	19.35	14	42.00	21.00	14	43.00	21.50	14	
87	34.80	17.40	8	38.28	19.14	8	39.15	19.575	13	42.50	21.25	13	43.50	21.75	13	
88	35.20	17.60	8	38.72	19.36	8	39.60	19.80	13	43.00	21.50	13	44.00	22.00	13	
89	35.60	17.80	7	39.16	19.58	7	40.05	20.025	12	43.50	21.75	12	44.50	22.25	12	
90	36.00	18.00	7	39.60	19.80	7	40.50	20.25	12	44.00	22.00	12	45.00	22.50	12	
91	36.40	18.20	7	40.04	20.02	7	40.95	20.475	12	44.50	22.25	12	45.50	22.75	12	
92	36.80	18.40	6	40.48	20.24	6	41.40	20.70	11	45.00	22.50	11	46.00	23.00	11	
93	37.20	18.60	6	40.92	20.46	6	41.85	20.925	11	45.50	22.75	11	46.50	23.25	11	
94	37.60	18.80	6	41.36	20.68	6	42.30	21.15	11	46.00	23.00	11	47.00	23.50	11	
95	38.00	19.00	6	41.80	20.90	6	42.75	21.375	11	46.50	23.25	11	47.50	23.75	11	
96	38.40	19.20	5	42.24	21.12	5	43.20	21.60	10	47.00	23.50	10	48.00	24.00	10	
97	38.80	19.40	5	42.68	21.34	5	43.65	21.825	10	47.50	23.75	10	48.50	24.25	10	
98	39.20	19.60	5	43.12	21.56	5	44.10	22.05	10	48.00	24.00	10	49.00	24.50	10	
99	39.60	19.80	5	43.56	21.78	5	44.55	22.275	10	48.50	24.25	10	49.50	24.75	10	
100	40.00	20.00	5	44.00	22.00	5	45.00	22.50	10	49.00	24.50	10	50.00	25.00	10	
101	40.40	20.20	5	44.44	22.22	5	45.45	22.725	10	49.50	24.75	10	50.50	25.25	10	
102	40.80	20.40	5	44.88	22.44	5	45.90	22.95	10	50.00	25.00	10	51.00	25.50	10	
103	41.20	20.60	5	45.32	22.66	5	46.35	23.175	10	50.50	25.25	10	51.50	25.75	10	

EXHIBIT 7

could become accustomed to the use of it, and showed up this information.

There is, however, one class of persons who will require special treatment and that class comprises salesmen or other persons working on a straight commission basis. Inasmuch as these persons do not punch a time clock and keep no record of their time worked, it will be necessary to make a record of their commission earnings on a straight weekly basis or else on some other specific period basis and convert back to a straight "weekly wage" by dividing the amount of earnings by the number of weeks worked, ignoring working hours completely. Persons employed on a fixed salary basis also can be classified together in one group and no record of their working hours need be kept, as it is an easy matter to compute their "full-time weekly wage" merely by dividing the amount of earnings received by the number of weeks worked. It is obvious, of course, that the basis of fixed salary employment cannot be less than a week.

### *Unemployment Benefit Claim*

A sample form titled "Employer's Initial Report on Unemployment Benefit Claim" is the next illustration (Exhibit 8). This form is not official, being only my conception of the information necessarily required from the employer. The pertinent information has been inserted in the spaces provided therefore, the information being taken from the "Individual Employee's Earning Record" previously described. Attention is invited to the second page of this form (Exhibit 8A) where a convenient record of the benefits paid is provided for. This portion of the form provides for recording "weeks of employment" also, because under the Wisconsin law the earliest weeks of employment are to be charged against the benefits as they occur. The calendar weeks actually worked and classed as "weeks of employment" only are inserted in the squares as shown. While the information given for this particular employee happens to be consecutive weeks, this would not be the case had he been absent for sickness, or for other reasons of his own accord, for a full week or more. Furthermore, the squares are so arranged that employees with different ratios of "weeks of employment" to "weeks of benefit" can be shown. For instance, an employee with a benefit rate of \$10 or less would have his "weeks of employment" inserted only in the columns headed 1, 2, 3, 4, because he is on a 1 to 4 ratio; an employee with a \$12.50 benefit rate, would have his "weeks of employment"

WISCONSIN UNEMPLOYMENT COMPENSATION  
EMPLOYER'S INITIAL REPORT ON UNEMPLOYMENT CLAIM

Claim No. \_\_\_\_\_

1. Name of Employer <u>John Doe Mfg Co</u>	2. File No. _____
3. Street Address _____	4. City _____
5. Name of Employee <u>Robert Roe</u>	6. State Reg. No. _____
7. Residence Address _____	8. Fed. Reg. No. _____
9. City _____	10. Employer's Reg. No. _____
11. Color _____	12. Sex _____
13. Occupation _____	
14. Date Hired <u>Jan 1, 1935</u>	15. Date Laid-off (last day worked) <u>Dec 31, 1936</u>
16. Number of weeks during which work was performed in preceding 52 calendar weeks prior to first week of unemployment <u>51</u>	
17. When was probationary period served? <u>Jan 1, 1935 to Jan 26, 1935</u>	
18. Number of "weeks of employment" entitled to for benefit credit <u>26</u>	

GIVE INFORMATION FOR EMPLOYEES EMPLOYED OTHER THAN ON A MONTHLY SALARY BASIS

19. Total hours actually worked during preceding calendar half year _____	1072
20. Total amount of wages earned for preceding calendar half year _____	\$ 817.22
21. Average earning rate per hour (item 20 divided by item 19) _____	76 cents
22. "Full-time" hours per week <u>40</u> (state how determined) _____	
23. "Full-time" weekly wage rate (item 21 multiplied by item 22) _____	\$ 30.40

GIVE INFORMATION FOR EMPLOYEES EMPLOYED ON A MONTHLY SALARY BASIS

24. Total amount of earnings for preceding twelve months _____
25. Monthly salary rate when lay-off occurred _____
26. Did employee receive \$150.00 or more per month during ten out of preceding twelve months? _____
27. Average monthly salary earnings for preceding calendar half year _____
28. "Full-time weekly wage" rate (item 27 multiplied by 12 divided by 52) _____

COMPUTATION OF BENEFIT LIABILITY

29. Weekly benefit rate (check against information following) <u>\$15.00</u>
NOTE: If "full-time weekly wage" rate is: less than \$20 per week, benefit rate is 50% thereof; \$20 or more and less than \$25, benefit rate is \$10.00; \$25 or more and less than \$30, benefit rate is \$12.50; \$30 or more, benefit rate is \$15.00; Minimum benefit rate is \$5.00 or highest actual weekly wage during preceding 52 weeks, if lower.
30. Ratio of benefit weeks to weeks of employment" <u>1 to 6 (1/6)</u>
31. Maximum number of weeks of benefit if unemployed <u>4 1/3</u>
32. Maximum amount of total benefits on this claim if unemployed <u>\$ 65.00</u>
33. Waiting period served for "total unemployment" from <u>Jan 3/37</u> to <u>Jan 23/37</u> ; for "partial unemployment" from _____ to _____
34. Date benefit liability expires (28 weeks after week of lay-off) <u>July 3, 1937</u>
35. Has employee been instructed to report to state free employment office located in vicinity? (Answer "yes" or "no") _____
36. Claim completed _____
37. Benefits terminated _____
38. Reason for termination _____
39. Remarks (state information which will assist the Industrial Commission in passing upon this claim) _____
40. Dated _____ Employer _____
Signed by _____ Title _____
41. Witness _____
42. Employee's Signature _____

shown in columns 1, 2, 3, 4, 5, because he is on a 1 to 5 ratio, and an employee with a \$15 a week benefit rate would have "weeks of employment" shown in all six columns because he is on a 1 to 6 ratio. Wisconsin is the only state that has more than one ratio provision in

WISCONSIN UNEMPLOYMENT COMPENSATION  
EMPLOYER'S INITIAL REPORT ON UNEMPLOYMENT CLAIM

Claim No. \_\_\_\_\_

RECORD OF BENEFITS PAID												
"Weeks of Employment" entitled to benefit credit							Record of Benefit Payments					
Ratio	1	2	3	4	5	6	Date	Refer.	Amount	Date	Refer.	Amount
Year	Calendar weeks numbered											
1.	1936	27	28	29	30	31	32					
2.		33	34	35	36	37	38					
3.		39	40	41	42	43	44					
4.		45	46	47	48	49	50					
5.		51	52									
6.												
7.												
8.												
9.												
10.												
11.												
12.												
13.												

*Exhibit 8a*

computing the number of weeks of benefit. All the other states have only one basis for the first unemployment. However, some of the other states pay additional benefits when the maximum weekly benefits have been received. Let me read to you the provision that the state of New Hampshire has. It reads as follows:

Section 18. An eligible employee who has received the maximum benefits permitted hereunder shall receive additional benefits in the ratio of one week of total unemployment benefit, or its equivalent, for each unit of twenty-four aggregate weeks of employment for which he has paid the employee contribution of one per cent provided herein occurring within the six years preceding the close of his most recent week of employment, and against which benefits have not already been

charged under this chapter. The maximum number of additional weeks of benefit thus allowed shall be ten, provided that such additional weeks shall not be a basis for partial unemployment benefits.

Alabama, the District of Columbia, Massachusetts, Mississippi, New Hampshire, Rhode Island and Washington have similar provisions in their laws, the length of employment performance being somewhat less than six years.

It is in these ratio provisions that employers will find the length of time for which records on individual employees must be maintained, for instance, six years for New Hampshire.

You will notice that I have taken the records in the order in which an employee appears thereon from the time he is hired to the time he is fired, and to the ultimate separation when the final Unemployment Compensation Benefit payment is made.

The records explained apply with equal force to the Federal Old-Age annuity law when that becomes effective next year and if I failed to explain this in the beginning it was because I did not wish to inflict too much punishment at one time.

CHAIRMAN MONROE: It is indeed unfortunate that this program has lasted a little longer than we expected. However, if there are some questions, I know Mr. Zastrow will be glad to answer them.

G. R. PALMER (*Controller, The Standard Register Co., Dayton, Ohio*): I would like to ask what provisions have been made with regard to salesmen selling strictly on a commission basis where we have no possible way of keeping a record of time, and where earnings fluctuate according to sales.

MR. ZASTROW: With the salesman on a commission basis you can do nothing but keep the commission records on some pay period or some definite period, either weekly or monthly. The only thing you can do is to take his wages, divide them by the number of weeks he has been with you, and that is the weekly wage. That is recognized in the Wisconsin Law. That is the way we did in this classification.

For people on definite salaries, you do not have to keep any hourly record. But for people for whom the definite number of hours of work is not known, that is, the commission men and the hourly people, you just take the wages divided by the number of weeks.

MR. PALMER: Suppose that in the case of a salesman on commission his earnings fluctuate, suppose he goes for a long period and earns, say, twenty-five dollars a week, and then he will get two hundred and fifty for a period. How would you handle a situation where the earnings fluctuate to that extent?

MR. ZASTROW: What you have to do is take the previous calendar year as a whole. In other words, you take the entire earnings for the year 1935, say, and divide that amount by fifty-two, and that is the weekly average. The Wisconsin Law provides that you have to take the entire fifty-two weeks of the preceding calendar year.

D. RICHARDSON (*Ass't Secretary & Treasurer, Monroe Calculating Machine Co., Orange, N. J.*): My question was similar to this gentleman's, with the exception of this, that if a salesman has consistently earned over three thousand dollars a year, although not necessarily two hundred and fifty every month, do you exclude him from your monthly report in a month when his earnings are less than two hundred and fifty? You know that he has made consistently over three thousand, and you know he will this year.

MR. ZASTROW: In those months when his earnings are less than two hundred and fifty dollars you pay contributions. In the months he earns more, you do not pay; each month is a unit by itself.

MR. RICHARDSON: He would be entitled to benefits later?

MR. ZASTROW: Do not mix benefits with payroll contributions. A salesman working on a strict commission basis is entitled to benefits if he gets ten thousand a year. The only persons not entitled to benefits under the Wisconsin Law are those persons who are on a definite monthly basis of two hundred and fifty dollars a month or more. And by the way that two hundred and fifty dollar contribution drops out of the picture on December 31, 1937, because of the Federal Law coming in which says two per cent for 1937 on all payrolls, so the Wisconsin definition of payroll next year will be two per cent on all payrolls.

E. L. KRAUSS (*Accountant, Federal Glass Co., Columbus, Ohio*): In regard to figuring employees' average hourly earnings

which you mentioned a while back, I notice that you include in that clock record the overtime excess hours. You mentioned something about eliminating them in figuring the average hourly earnings. Now do you include the overtime excess money divided by the actual hours worked to establish that record?

MR. ZASTROW: Let us take that clock card for a moment. That man's hourly rate is fifty cents an hour and he worked one hundred hours. Now one hundred divided into 5560 is that man's average hourly earning rate, or 35.6 cents. Multiply that by the full-time weekly hours, and that is the weekly wage. It is a theoretical wage, pure and simple.

THOMAS L EVANS (*Controller & Assistant Secretary, Weston Electrical Instrument Co., Newark, N. J.*): In the case of lost time through accident, how is the lost time accounted for?

MR. ZASTROW: The man receives workmen's compensation; he does not receive unemployment benefits. And if he is not able to work he does not receive weeks of employment to his credit. In other words, his workmen's compensation will compensate him fully for the time he is out of work because of an accident.

CHAIRMAN MONROE: Thank you, Mr. Zastrow.

This session has been very timely and very interesting, I am sure, to all of us. We have exceeded our time, and we are going to adjourn.

. . . The meeting adjourned at five thirty-five o'clock . . .



SESSION III

ACCOUNTING FOR CAPITAL  
ASSETS AND DEPRECIATION

WEDNESDAY AFTERNOON, JUNE 24, 1936

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M. B. WALSH, Partner, Walsh and Company, Detroit, Mich.  
*Chairman*

DAVID HIMMELBLAU holds the degrees of B A from the State University of Iowa and B.B A from Northwestern University and is a Certified Public Accountant of the State of Illinois In 1913 he joined the accounting staff of Northwestern University, becoming a professor in 1919. Since 1922 he has headed that department. His first practical experience was received in the Navy Department during 1917-19, where he was in charge of the Cost and Financial Investigations Section of the Accounting Division. After the war he became a partner of Arthur Anderson & Co., where he served until 1922 when the firm of David Himmelblau & Co was established Professor Himmelblau is a charter member of the N. A. C. A. and has addressed many chapter meetings. He is a past president of the American Association of University Instructors in Accounting and of the Illinois Society of Certified Public Accountants He is also a member of the American Institute of Accountants and the American Society of Certified Public Accountants

ARCHIBALD B HOSSACK has had many years of wide, diversified experience as a leader in the appraisal profession He is Vice-President and Eastern Manager of The American Appraisal Company; a Graduate Civil Engineer of the Worcester Polytechnic Institute; and a member of The American Society of Mechanical Engineers. Mr Hossack has on various occasions addressed the chapters of the National Association of Cost Accountants; The American Management Association, and other engineering, accounting, and civic groups He draws upon a wide acquaintanceship with valuation problems, and a broad experience in property investigations, valuations, and reports on diversified properties in the United States and its possessions, in meeting the requirements of litigations, financing, and accounting. His experience and contacts have given him a high degree of specialization in property records and depreciation for federal and state income tax requirements

JOHN H. DEVITT received his accounting education from the Walton School of Commerce, Chicago, Illinois. In 1922 he became associated with the Hammermill Paper Company laboratory and was later transferred to the engineering department. He entered the auditing department of this company in 1927 and at the present time is Assistant Auditor A charter member of the Erie Chapter of N. A. C. A., he has served in various capacities, being elected President of the Erie Chapter for the year 1933-34 He was elected to the National Board in 1934, and has been appointed Director in charge of Member Attendance for 1936-37.

## ACCOUNTING FOR CAPITAL ASSETS AND DEPRECIATION

CHAIRMAN REUWER: We shall return today to the brass tacks of the fundamentals of accounting procedure. Today's sessions have been organized by a National Director of the National Association of Cost Accountants, founder of the Walsh Institute of Accountancy, and a partner of Walsh and Company, who hails from the City of Detroit. It is a pleasure to present to you the day's Chairman, Mr. Mervyn Walsh!

CHAIRMAN WALSH: Today's sessions are dealing with fundamental subjects of accounting in which all accountants should be interested.

There is hardly an accountant in the country that has not had the problem in the past year or two of depreciation, and particularly with respect to depreciation and taxation. The session this morning has been organized, first to take up the underlying principles of depreciation and treatment of capital assets, and to superimpose upon that foundation a practical discussion of the methods followed by various companies.

We are going to crystallize this general discussion in the last paper by giving you a specific method of accounting for capital assets, to complete a well-balanced program.

The first speaker needs no introduction. He is a charter member of the National Association of Cost Accountants. He has spoken before a number of chapters, and is well known to the members. He is a member of the American Institute of Accountants; he is a member of the American Society of Certified Public Accountants; he is Past President of the Illinois Society of Certified Public Accountants; he is Past President of the American Association of University Instructors in Accounting. Professor Himmelblau also heads the Accounting and Business Administration Departments at Northwestern University. He is engaged in the public practice of accountancy, and he has a perfect blending, so to speak, of academic and practical training.

It gives me pleasure to introduce Professor David Himmelblau, of Chicago.

## PRESENT-DAY NEED FOR IMPROVED ACCOUNTING FOR PLANT AND EQUIPMENT

DAVID HIMMELBLAU

Head, Department of Accounting, Northwestern University,  
Chicago, Ill.

THE subject assigned to me for this morning's session is a very broad one. Mr. Walsh suggested that I cover the theory of depreciation, the various methods of calculation, the use of composite rates, the factors of depreciation, the effect of asset revaluation, etc., together with tax decisions affecting depreciation.

### PART 1. DEPRECIATION IN GENERAL

#### THEORY OF DEPRECIATION

As used in this paper, depreciation refers to spreading the value of a fixed asset over the accounting periods comprising its service life.

The service life factor is measured by the number of accounting periods (months or years) the asset is to be used.

The value factor may be measured under four plans—

- (1) Historical net cost, i.e., the excess of the amounts expended to acquire an asset over the dollar value obtainable when it is disposed of at the end of the service life.
- (2) Current cost of replacement, i.e., the price which would be paid *now* to replace the identical asset in identically present physical condition. This is commonly referred to as sound appraised value.
- (3) Cost of replacement at end of service life, i.e., the price which would be paid *when the replacement is made* to replace the identical asset new.
- (4) Original cost adjusted to reflect the so-called stabilized dollar, i.e., the historical cost adjusted to reflect the difference between the purchasing power of the dollar *now* as compared with that existing at the date the asset was purchased.

#### PURPOSE FOR WHICH DEPRECIATION WRITE-OFF IS USED

The purpose for which the depreciation write-off is to be used is the most important single factor to be considered in selecting the method of allocating the basic value over the service life. The various purposes commonly arising are:

- (1) Balance sheet valuation of depreciable assets
- (2) Determination of profits available for dividends
- (3) Determination of profits subject to income tax
- (4) Cost accounting
- (5) Rate cases (utilities, railroads, etc.)

### *1. Balance Sheet Valuation of Depreciable Assets*

The balance sheet sets forth the financial condition of a business enterprise at a given date. For the purposes of this paper, the depreciable fixed assets of a particular business conducted as a going concern are viewed as prepaid charges to future operations. Hence, they are shown at the basic value less a deduction for accrued depreciation to date based upon one of the methods hereinafter discussed.

From the balance sheet point of view, the essential consideration as to depreciation is the query: Is the total accumulation at balance sheet date adequate? From this point of view it is immaterial whether this accumulated depreciation was set up in a lump sum or was spread over the past accounting periods; it is immaterial whether the annual depreciation written off is or is not an allowable deduction under tax laws.

It is important to note that this balance sheet value does not pretend to be the sum which could be realized at the balance sheet date if the fixed asset were to be sold as a going concern, sold on a liquidating basis, or valued in connection with an adjustment of loss from fire, or the sum which would have to be expended if the asset were replaced in its existing condition. In other words, exchange value need not be considered.

Nor does the total accumulated depreciation appearing on the balance sheet pretend to measure the exact amount of deterioration or obsolescence that has taken place up to that date. The literature issued by appraisers has given the impression that the major problem in creating a reserve for depreciation is to measure the actual amount of deterioration and obsolescence at the balance sheet date. With this I cannot agree. The accountant's problem is to allocate fairly the cost of an asset over certain accounting periods, the method of allocation varying according to which one of the five purposes mentioned is to be attained. The balance sheet shows the carrying value at a given date under the particular depreciation method selected. There is nothing new or inconsistent in this statement of the problem. The usual procedure is to spread a five-year insurance premium equally over each of the five years even though at the end of the

first year its effect is to carry unexpired insurance on the balance sheet at a higher figure than the sum to be received if the insurance were cancelled at that date.

### *2. Determination of Annual Profits Available for Dividends*

The phrase "profits available for dividends" is used to denote the amount of profits for the current accounting period, say one year, which under any contracts with bondholders, etc., and subject to any statutory provisions, a business enterprise may distribute among its owners.

For this purpose the essential consideration as to depreciation is the query: Is the amount of depreciation deducted in determining the current year profits a fair share of the basic value? Hence, from this point of view, it is immaterial whether the depreciation thus written off is or is not an allowable deduction under income tax laws; it is immaterial whether the total accumulation on the balance sheet is excessive or inadequate due to errors in prior years.

### *3. Determination of Profits Subject to Income Tax*

For this purpose the essential consideration is the query: What deduction for depreciation of fixed assets is permitted by the statutes of the governmental body assessing the income tax? It should be borne in mind that this deduction rests upon varying statutory bases which will be discussed later.

### *4. Cost Accounting*

For this purpose the essential consideration is the query: What part of the basic value of a given asset is fairly apportioned against a unit of production or distribution, said unit being either a process or a job? This is a short period calculation. Hence, it is immaterial whether depreciation thus written off is or is not an allowable deduction under income tax laws; it is immaterial whether the total accumulated depreciation shown on the balance sheet is excessive or inadequate; it is immaterial whether the depreciation charged into costs is more or less than the amount deducted when calculating profits available for dividends.

### *5. Rate Cases*

For this purpose both aspects of depreciation must be considered, viz., (a) Is the total accumulation at date of balance sheet adequate, and (b) has an equitable amount been deducted from the annual

profits? An enumeration of the depreciation problems arising in rate cases is impossible within the limits of this paper. However, attention is called to the recent decision of the United States Supreme Court in the case of United Railways & Electric Co. of Baltimore which permits the company to use reproduction cost as the basis for its depreciation expense estimate as well as for the rate base.

#### METHODS OF CALCULATING DEPRECIATION

The principal methods used by accountants for spreading the basic value of fixed assets over their service life are:

- (1) Straight-line
- (2) Production
- (3) Appraisal
- (4) Reducing balance
- (5) Sinking fund
- (6) Annuity
- (7) Retirement expense (used by most utilities)

The straight-line, production and appraisal methods will be discussed. The others are not used extensively.

##### (1) *Straight-Line*

The straight-line method spreads the net cost of a fixed asset equally over the years comprising its service life through the following formula:

$$\frac{\text{Net Cost of Asset}}{\text{Service Life (in years)}} = \text{Portion of Net Cost Allocated to One Year}$$

The simplicity of the straight-line method makes it easily understood. The ease of checking the depreciation deductions over a period of years has caused it to be favored by income tax authorities.

##### (2) *Production*

The production method spreads the net cost of a fixed asset over its service life through the following formula:

$$\frac{\text{Net Cost of Asset}}{\text{Service Life (in units of production)}} = \text{Portion of Net Cost Allocated to One Unit of Production}$$

This method differs from the straight-line method in that service life is measured in terms of units of production, i.e., mileage (in case of automobiles), tons, barrels, machine hours, etc., instead of years. It automatically adjusts the depreciation write-off to the rise and fall of the physical volume of production and distribution processes using the depreciable assets.

### (3) *Appraisal*

The appraisal method is as follows: To the appraised value of fixed assets at beginning of year add purchases of fixed assets and deduct appraised value of fixed assets at end of year. Balance is depreciation of fixed assets to be charged off for that year.

It involves: (a) an enumeration of assets on hand at the end of a year, (b) a determination of the physical condition of each asset, and (c) determination of the replacement value of each asset in its then physical condition. It is obvious that such value is greatly influenced by market conditions at date of appraisal and by the glasses (blue or rose, depending on our cycle) worn by the appraiser. Because of these extraneous elements the appraisal method lends itself too readily to adjusting profits through larger or smaller depreciation charge-offs. Accountants have strongly opposed the appraisal method notwithstanding the fact that occasionally it does provide a fair depreciation charge against a given year.

## PART 2. DEPRECIATION UNDER INCOME TAX LAWS

Depreciation under the income tax laws was the third purpose mentioned in this paper. In many cases the amount of depreciation deducted on the tax return differed from the amount of depreciation shown in reports to stockholders and from the amount of depreciation charged into the cost accounts. Until 1934 this situation was unimportant. If a taxpayer charged off excessive depreciation annually there was a taxable profit when the asset was finally sold. Likewise, if too little depreciation was charged off annually, there was a deductible loss when the asset was sold. Tax rates were quite stable so it made very little difference in what year the deduction was allowed for tax purposes.

On February 28, 1934 the treasury department issued T. D. 4422. And what a commotion resulted! It would be interesting to know the number of words written and spoken about that document. In the mass of words the important points are apt to be lost, so it is

desirable to examine the exact language employed in T. D. 4422, to determine its requirements and have a means of ascertaining whether the revenue agents in 1934, 1935 and 1936 have gone beyond its requirements.

### *Analysis of T. D. 4422*

Each sentence of Regulations 77, Article 205 as amended by T. D. 4422, will be discussed separately.

- (1) The capital sum to be recovered shall be charged off over the useful life of the property, either in equal annual installments or in accordance with any other recognized trade practice, such as an apportionment of the capital sum over units of production. Whatever plan or method of apportionment is adopted must be reasonable and must have due regard to operating conditions during the taxable period.

All of this language is substantially the same as the original regulations and there is nothing therein that is not in accordance with standard accounting practice.

- (2) The reasonableness of any claim for depreciation shall be determined upon the conditions known to exist at the end of the period for which the return is made.

All of this language is the same as before and it conforms with standard accounting practice. However, one point requires emphasis. The taxpayer setting up the amount of the depreciation deduction each year is necessarily limited to his knowledge of the conditions as they exist at the end of that year. A revenue agent, coming in two years afterwards, finds it difficult to limit himself to the facts known at the end of the tax return period. Consciously or unconsciously, he gives substantial weight to the additional facts discovered between the end of the taxable period and the date of his examination, especially if such facts indicate that the taxpayer's depreciation deduction could be reduced for that year. It may be said that the taxpayer should assemble sufficient proof of the conditions existing at the end of the taxable period so he may be in a position to demonstrate that the agent's proposed changes are based primarily on subsequent facts. But it must be borne in mind that taxation is a practical matter; that the attempt to build up such elaborate proofs involves an expense which may be altogether out of proportion to the amount of tax involved.

- (3) Where the cost or other basis of the property has been recovered through depreciation or other allowances no further deduction for depreciation shall be allowed.

The only change from prior language is the reference to the "other" allowances as well as depreciation allowances. These other allowances, no doubt, refer to special amortization allowed certain companies which had war facilities. However, if part of the plant costs have been charged off through amortization deductions, no one would contend for a second charge-off through depreciation deductions. There can be no reasonable objection against the language as it now stands.

- (4) The deduction for depreciation in respect of any depreciable property for any taxable year shall be limited to such ratable amount as may reasonably be considered necessary to recover during the remaining useful life of the property the unrecovered cost or other basis.

All of this language is new. On the surface there would seem to be no objections thereto. In practice, the difficult problem is the determination of useful life. In most cases useful life is shorter than physical life. There seems to be a tendency on the part of many agents to use physical life rather than useful life. Prior to 1934, an error in underestimating the life of an asset was not serious because if insufficient depreciation was taken annually, there would be a deductible loss in the year the asset was sold. Under the 1934 law, and since, this loss on the sale of the asset is no longer deductible beyond a \$2,000 limitation. It is, therefore, important that the agent be more liberal in determining the useful life. If he errs on the side of underestimating the life of the asset, thereby giving the taxpayer excessive annual depreciation, the government is protected through a tax on the profit arising upon the sale of the asset. On the other hand, if he errs in the direction of overestimating the life, thereby giving the taxpayer insufficient annual depreciation, the taxpayer is penalized because the loss on the sale may not be deductible. A continuation of the present attitude will, in many cases, make it necessary for a taxpayer to keep assets or scrap assets which as a matter of good business practice should be sold.

- (5) The burden of proof will rest upon the taxpayer to sustain the deduction claimed.

This language is new. It is a radical change from previous practice. Heretofore the rule had always been that—

While the burden of proof must rest upon the taxpayer to sustain deduction taken by him, such deductions will not be disallowed unless shown by clear and convincing evidence to be unreasonable.

Bear in mind that the burden of proof has been shifted from the government to the taxpayer. The point is important because the nature of many plant assets is such that it is difficult to prove either side of the question and whoever has the burden of proof is apt to lose the case.

- (6) Therefore taxpayers must furnish full and complete information with respect to the cost or other basis of assets in respect of which depreciation is claimed, their age, condition and remaining useful life, the portion of their cost or other basis which has been recovered through depreciation allowances for prior taxable years, and such other information as the Commissioner may require in substantiation of the deductions claimed.

All of this language is new. On the surface there is nothing to which an objection can be made. However, in its administration the Commissioner of Internal Revenue issued Mimeograph 4170 which lays down certain reporting requirements which are expensive to comply with

#### *Analysis of Mimeograph 4170*

Mimeograph 4170 calls for an analysis of each property account to show—

- (1) year acquired,
- (2) original cost and subsequent additions by years,
- (3) deductions through sales and other dispositions in each prior year, and
- (4) adjusted cost at beginning of the current year.

Likewise for each depreciation reserve account—

- (1) credits to depreciation reserve in each prior year,
- (2) charges to depreciation reserve in each prior year, and
- (3) depreciation reserve at the beginning of the current year.

Whether intentional or not, it is apparent that these schedules enable the treasury department to reaudit the property accounts and depreciation deductions for all prior years.

The tables in Mimeograph 4170 need not be prepared until requested by the examining agent, although many people made them up anyway. The data need not be furnished where—

- (a) the depreciation is a minor factor in determining net income,  
or
- (b) it is evident that no taxable income will be developed, or
- (c) data filed in connection with prior year returns meet the present requirements.

If upon examination and verification of the schedules it is found that the cost or other basis of any depreciable property has been fully recovered though the property is still in use or where the reserve as provided is higher than is justified by the actual physical condition of the property, it will be presumed by the treasury department that the depreciation rates allowed in the past have been excessive. In such cases the unrecovered cost is to be spread over the remaining life.

#### *Allowed vs. Allowable*

Under the current laws, the distinction between "allowed" and "allowable" depreciation has now become important. Allowed depreciation is the amount deducted in returns accepted by the treasury department. Allowable depreciation is the amount which should have been taken in prior years; that is, the agent now states that the taxpayer should have claimed a larger deduction in prior years and if such claims had been made they would have been allowed. If a taxpayer claimed large deductions which were reduced by the treasury department, an agent cannot now claim that the amount allowable is greater than the amount allowed. But if a taxpayer tried to be reasonable, so that the amount claimed on the return was the amount finally allowed, he has no protection against an agent's assertion that a larger sum should have been claimed and would have been allowed.

With the burden of proof on the taxpayer to prove that such assertions by an agent are wrong, the agent has the opportunity to reallocate depreciation to past years which are now closed, and thus nullify the statutory provision which purports to grant a "reasonable allowance for the exhaustion, wear and tear including obsolescence."

Hindsight is always better than foresight, so it is obvious that there will be a continuous argument as to whether the taxpayer should have known at the end of each of the prior years that his depreciation deductions then claimed were inadequate.

It is apparent that the criticism lies not against T. D. 4422, but against the manner in which it is applied by overzealous agents. If revenue agents will bear in mind that under the fundamental concept of the income tax law the taxpayer is entitled to deduct the cost of an asset during its useful life, no more and no less, then very few questions will arise. But if, in the desire to obtain more immediate tax revenues, the agents use methods which actually result in disallowing part of the cost of assets, then the Board of Tax Appeals and the courts will be filled with litigation cases for the next five years.

### *Current Problems*

Some of the current problems which are being dealt with in 1936 tax returns will be briefly enumerated.

(1) Excessive rates in past years. In such cases the remaining undepreciated cost should be spread over the remaining estimated service life, thus reducing the annual depreciation to be taken for the year 1936 and thereafter.

(2) Inadequate rates in past years. In such cases the agent will try to prevent the taxpayer from recovering the deficiency during the remaining life.

(3) Plant units fully depreciated but still in use. In such cases no further depreciation may be taken on these assets which are one hundred per cent depreciated.

(4) Plant not in use. In this case I believe that the agent will probably charge off depreciation on the year-life basis, rather than the production basis. This will throw part of the depreciation against the loss years during the depression period. In that case the taxpayer will not be able to recover his full cost.

(5) Adjusting depreciation deduction according to plant activity. Agents do not like that method. If you use it, it is important to preserve all the data necessary to prove that the amount deducted under that plan is a reasonable deduction.

(6) Basis for units acquired through reorganizations. It is necessary to go back to 1917 and follow each year separately under the various laws. Usually the books do not show the tax basis for assets acquired under reorganization. If that be the case, it is neces-

sary to establish a new plant record which will show what is the allowable basis under each tax law affecting any of the assets acquired under a reorganization.

(7) Asset revaluations. As to assets which were marked down, particularly during the past several years, the rule is obvious. All mark-ups and all mark-downs are discarded and ignored. They do not affect the depreciation deduction.

(8) Basis for units scrapped or sold. Use cost or any other basis required by the statutes, reduced by the amount of the allowed depreciation or the allowable depreciation, whichever is the greater.

### *Summary*

(1) T. D. 4422 makes one important change, namely shifts from the treasury department to the taxpayer the burden of proof as to the reasonableness of the annual depreciation deduction.

(2) The 1934 Revenue Act makes one important change, namely, the net loss from the sales of capital assets which is in excess of \$2,000 is not deductible from income although a corresponding profit is taxable income.

(3) Mimeograph 4170 sets forth the form in which the property accounts and related depreciation reserves are to be summarized so as to enable the Bureau to reaudit these accounts for prior years.

(4) The ratio of the depreciation reserve to the asset account will be used by the Bureau as a test of excessive depreciation.

(5) The only credits to the asset account will arise from assets retired from service and scrapped. The entire cost of such assets is to be charged against the depreciation reserve so that there will be no loss arising from such retirements.

(6) The various problems to be dealt with currently require more detailed and more accurate records as to cost of fixed assets and their estimated service lives.

CHAIRMAN WALSH: We are reverting to fundamentals in more than one way. We are going to have discussion after each paper, superseding the method followed last year of waiting until the end of the sessions. Because of our limited time we must, of necessity, limit questions. However, Professor Himmelblau will be glad to answer any questions you may have to ask.

EDDIS JOHNSON (*Chief Accountant, Kellogg Switchboard & Supply Co., Chicago, Ill.*): The treasury department in another place says that it is not necessary to have a great volume of detailed

records for your plant assets, but T. D. 4422 says, "The burden of proof will rest upon the taxpayer to sustain the deduction claimed." Do not those statements seem to be contradictory?

PROFESSOR HIMMELBLAU: They do not contradict. It says you do not have to keep detailed records, but if you do not and the information is needed, you are out of luck because you have the burden of proof.

J. ROSS SMITH (*General Factory Accountant, Western Electric Co., New York, N. Y.*): I understood the speaker to say that the agents do not like depreciation based on plant activity. But in T. D. 4422, in the last two lines of the first section quoted, is the statement: "The apportionment must be reasonable and must have due regard to operating conditions during the taxable year."

Now the straight-line method usually apportions the depreciation in equal sums over the life of the plant. During the depression some plants have operated as low as twenty per cent of normal, possibly lower. Do I understand the speaker to infer, then, that a condition of that kind should not be recognized in determining the amount of depreciation which should be charged off each year?

PROFESSOR HIMMELBLAU: No, I was trying to distinguish between what the official regulations call for and what the agents in practice are doing. An agent in practice does not always hold himself within the official regulations if he does not like them.

Taking the depression years, if your plant was not in use at all you may not have charged off anything because there was no activity. There is nothing to prevent an agent from reverting to the straight-line method and, under the allowable concept, asserting that if you had claimed a certain amount of depreciation, on the year-life basis, it would have been allowed. Therefore, he proposes to include under the heading of "allowable" depreciation the difference between the amount of depreciation on the year-life basis and the amount on the activity basis. Then you have a fight on your hands.

MR. SMITH: May I ask another question? In your opinion, do you believe that industry is justified in varying the rates of depreciation based upon activity?

PROFESSOR HIMMELBLAU: I have been preaching that for twenty years.

MAURICE E. PELOUBET (*Partner, Pogson, Peloubet & Co., New York, N. Y.*): Where depreciation allowed for tax purposes is clearly inadequate, which naturally makes taxable income greater than corporate income, and where the company has sufficient cash to pay out all of its taxable income in dividends, what should the company do in its corporate accounts? Should it revert to the inadequate depreciation allowed for tax purposes, or should it show a deficit of surplus for the year? I think there will be a great many companies in that position.

PROFESSOR HIMMELBLAU: Well, the first question is whether or not the company has a surplus. If it has a surplus, it is a simple matter to charge against surplus the excess depreciation that should have been taken in prior years. That relieves the current year of such excess charges. If it has a deficit at the beginning of the year, it would be increased by the depreciation which should have been taken in prior years.

The point I was discussing in my paper was merely the difference between the taxpayer and the agent as to what was a reasonable deduction for the current year. I did not attempt to go into those cases where both admit that more depreciation should have been taken in the past years.

MR. PELOUBET: Sorry, but I do not think that answers the question. My point is this: Your allowed depreciation for tax purposes is plainly inadequate; that is, the company knows that their tax depreciation is incorrect, and they know they must write off more for corporate purposes than they are allowed for tax purposes. Now that being the case, and the company having enough cash to be able to pay out all of their taxable income which is in excess of their corporate income in dividends, you then have the position of paying out, we will say, \$150,000 in dividends and showing the corporate income of \$125,000.

Now what I say is, should the corporation show a reduction in surplus for that year? It is not a question of applying it to years; we know that the tax depreciation is inadequate, we know the corporate depreciation is substantially right, and we pay out all of our taxable income in dividends.

Is it better for the company to revert to the admittedly inadequate tax depreciation in their accounts, or should they show that their surplus has been depleted by paying out the dividends they are forced to pay out under the present Act?

PROFESSOR HIMMELBLAU: At the beginning of the discussion I called attention to the difference between the depreciation deductible under tax laws and depreciation arrived at by usual accounting methods. In accordance with that demarcation, we would ignore entirely the depreciation deductible for tax purposes, and account for net earnings for the year in the way we believe it should be done. The two are entirely separate and distinct. There have been any number of cases where for tax purposes you have little or no depreciation because of the manner in which the corporation has been reorganized and securities sold. Under its contracts there must be a substantial deduction from net earnings. There is no option in such a case but to deduct the necessary amount for depreciation.

E. H. SCHULTZ (*Assistant Controller, Carnation Co., Oconomowoc, Wis.*): Under the new tax law, if it should be necessary to dissolve some subsidiaries, if one of these subsidiaries has a deficit, what will be the basis for the depreciation of the capital assets taken over by the parent company?

PROFESSOR HIMMELBLAU: In what year is the company to be dissolved?

MR. SCHULTZ: 1936.

PROFESSOR HIMMELBLAU: In 1936, there is no profit or loss, so the receiving company takes the assets at the same basis they had in the hands of the dissolving company. It was different in prior years.

MR. SCHULTZ: Is it necessary to add the deficit to the cost of the investment on the parent company's books?

PROFESSOR HIMMELBLAU: So far as depreciable assets are concerned, which is our sole problem, the parent company receiving those assets takes them over on exactly the same basis that they had in the hands of the preceding company—no more and no less.

EMORY A. AUSTIN (*Auditor, Hammermill Paper Co., Erie, Pa.*): I would like to ask if the subject of the unitary method of computing depreciation is going to be covered in one of the later

papers. Professor Himmelblau, I believe, has covered the so-called composite method of figuring depreciation.

CHAIRMAN WALSH: The answer is that reference may be made to the unit method, but how specific it will be we shall have to wait to see. The final paper of the morning is a specific treatment of the unit method of depreciation in detail.

MR. AUSTIN: I would like to make this observation, that in the case of losses on retirements, Professor Himmelblau has inferred that no such loss would be allowed, except up to \$2,000 in case of sales. Now, under the composite-rate method, the loss would not be deductible, whereas under the unitary method, losses are allowable provided, I understand, that the record shows the loss and that the rate of depreciation covers the longest-life asset. In the case of the unitary method, there being one asset or one item in the class, naturally it would be the longest-life asset. Is that your understanding, Professor Himmelblau?

CHAIRMAN WALSH: I am going to restate the question. Mr. Austin raised the point that under the use of a composite rate the loss from the sale of a specific asset would not be deductible, whereas, on the contrary, under the practice of depreciating each unit, you may take the loss. Mr. Austin was questioning Professor Himmelblau's statement that the loss could not be deducted.

I think there is some question about the \$2,000 maximum that Professor Himmelblau referred to.

PROFESSOR HIMMELBLAU: There is a \$2,000 limitation on losses; that is your maximum, no matter how you get it. Now if you should happen to have gains from other items, then of course you could offset the losses against these gains. I am considering the common situation where the losses exceed the gains. No matter how you figure, you cannot have more than \$2,000 loss.

MR. AUSTIN: I think the limitation of the loss on capital assets to \$2,000 refers to those assets which are sold or exchanged only, whereas we may have losses on assets which are retired or otherwise abandoned or scrapped. In any case, under the composite rate, as I understand it, that loss is chargeable to the Reserve for Depreciation and Obsolescence, whereas on the unitary method, I believe, it is possible to take those losses in the year in which they occur as additional depreciation or obsolescence.

PROFESSOR HIMMELBLAU: Yes, you are correct on that. You are speaking of another point. The type of loss you refer to does not arise from a sale but merely from the scrapping of an asset. Where an item that is identified is retired from service, by transfer to the scrap pile instead of being sold, that loss becomes obsolescence and would be deductible as obsolescence in the year it is scrapped. I mentioned at the very end of the paper that if the amount of depreciation not taken currently, year by year, should become serious, it will be necessary to keep far more detailed records as to plant depreciation, so that you would have practically an itemized accounting for all fixed assets. That is rather expensive for many people.

CHAIRMAN WALSH: I would like to continue this discussion but time will not permit.

In discussing the subject of capital assets and depreciation, we felt that our discussion would not be complete without having the comments of an engineer. As we all know, the subject of capital assets and depreciation is closely allied with engineering practice and procedure, so we have been fortunate this morning in securing an engineer who has had a diversified experience in the field of capital assets and depreciation. He is going to present the problem from an engineer's view.

The speaker is a Graduate Civil Engineer of the Worcester Polytechnic Institute, and has had a number of years' actual experience in the field. It gives me pleasure to introduce Mr. Archibald Hossack, Vice President of The American Appraisal Company. Mr. Hossack.

## ACCOUNTING PROCEDURES FOR CAPITAL ASSETS AND DEPRECIATION

A. B. HOSSACK

Vice President, The American Appraisal Company,  
New York, N. Y.

IT is a privilege to have the opportunity of addressing your national meeting. I have had the pleasure of addressing a number of your local chapters, including your outpost at Honolulu. The interest of your members and attendance attained should be an inspiration to your national officers.

When I received the invitation to address your group on the subject assigned, I wondered a little, and even considered suggesting a

change in the subject, until I found that the advance printing was already done. It is quite obvious that the subject was selected before the speaker. The part of the subject that caused me some concern, was the designation "Accounting Procedures."

In order that there may be no failure to disclose any material fact and thus bring charges or disrepute to the appraisal or engineering professions, to which I belong, I want to state that I had nothing to do with the selection of the subject, or your selection of the speaker; that I am an engineer and appraiser, not an accountant; that the firm with which I am connected, does no accounting work; that accordingly, I do not come here to advise or even suggest "accounting procedures."

From the invitation of Director Walsh, I, however, gained the general idea that regardless of the subject, you were apparently interested in the control of the capital assets and the determination of the depreciation in respect to such assets. This prompted me to accept the assignment.

It is my belief that the proper control of capital assets and their depreciation involves more than accounting procedures, and contact with many of your accounting firms over a period of years, leads me to believe that the accounting profession and cost men are increasingly aware of this fact. It is these other phases which can and should be tied in and reconciled with your accounting procedures regarding which I am going to talk.

#### *Need and Importance of Control Illustrated*

The necessity and importance of the proper control of the capital assets and the resulting charges for the use of such assets can be readily demonstrated from practically any balance sheet and operating statement. For the purpose of demonstrating the importance of this matter I have selected ten companies and have made certain tabulations from the published balance sheets and operating statements. These companies were not selected because of any abnormality or due to any belief or suspicion that necessarily their property accounts are not under control, or their charges not properly computed. The selection was made so as to obtain information from available published data over a period of time, both during the business depression as well as prior thereto, for different types of industries. The tabulation on page 23 illustrates the points. If you will refer to this tabulation of the ten companies, you will find that they represent some diversity in type of plants.

EXHIBIT SHOWING FOR 10 INDUSTRIAL COMPANIES A COMPARISON OF THE AMOUNT INVESTED IN CAPITAL ASSETS TO TOTAL ASSETS, ALSO THE DEPRECIATION CHARGES IN RELATION TO SALES AND TO NET INCOME.

Kind of Company	Total Assets	Gross Property Account	Net Property Account	Percentage Net to Gross	Annual Deprec. and Deplet. Charge	Percentage Deprec. to Deplet. of Gross Sales	Annual Sales	Percentage Deprec. of Net Income
Averages of Five Years 1925 to 1929								
Heavy Machinery Mfrs.	\$ 65,655,000	\$ 44,489,000	\$ 33,659,000	75.5	% 51.2	% 1.6	\$ 34,910,000	2.0
Meat Packing	467,927,000	Not Published	202,560,000		43.3	8,576,000	850,000,000	1.0
Oil Company	147,226,000	119,238,000	72,262,000	60.7	49.1	9,723,000	1,483,358,000	6.6
Steel Producer	671,950,000	654,475,000	460,223,000	70.5	68.6	13,079,000	297,236,000	4.4
Steel Producer	2,412,316,000	2,360,100,000	1,654,397,000	70.0	68.7	52,984,000	3,141,858,000	3.7
Tractor Mfr.	29,812,000	17,217,000	13,123,000	76.0	43.8	834,000	33,628,000	2.5
Automobile Mfr.	1,058,188,000	470,996,000	328,141,000	69.7	31.0	26,031,000	1,205,286,000	2.2
Automobile Mfr.	61,474,000	40,705,000	27,595,000	67.8	44.9	3,379,000	186,372,000	1.8
Rubber Company	218,908,000	99,650,000	88,519,000	89.0	40.4	9,135,000	239,834,000	3.8
Food Products	110,024,000	95,315,000	67,542,000	71.0	61.4	6,202,000	191,582,000	3.2
Averages	.....	.....	.....	72.2	50.2	.....	.....	3.1
Averages of Six Years 1930 to 1935								
Heavy Machinery Mfrs.	\$ 71,542,000	\$ 43,917,000	\$ 28,935,000	66.0	40.4	\$ 767,000	26,067,000	2.9
Meat Packing	353,802,000	226,621,000	172,937,000	76.6	48.9	6,692,000	622,500,000	1.1
Oil Company	159,597,000	170,706,000	97,083,000	57.0	60.8	10,287,000	97,805,000	10.5
Steel Producer	674,646,000	728,772,000	504,419,000	69.3	74.8	13,838,000	170,995,000	8.1
Steel Producer	2,142,082,000	2,385,577,000	1,603,119,000	67.3	75.0	46,621,000	690,497,000	6.8
Tractor Mfr.	44,338,000	25,768,000	17,654,000	68.5	39.8	1,744,000	26,230,000	6.7
Automobile Mfr.	1,179,425,000	581,223,000	354,220,000	61.0	30.1	35,164,000	801,975,000	4.4
Automobile Mfr.	60,379,000	50,522,000	25,517,000	50.7	42.2	2,718,000	46,893,000	5.8
Rubber Company	202,631,000	162,090,000	87,423,000	54.0	43.1	10,084,000	147,272,000	6.8
Food Products	207,072,000	169,234,000	116,228,000	68.8	56.1	9,277,000	283,253,000	3.3
Averages	.....	.....	.....	63.9	51.1	.....	.....	5.6
							Loss	...
							Loss	....
							3,869,000	265.6
							9,223,000	139.2
							Loss	....
							3,060,000	57.0
							98,891,000	35.5
							Loss	....
							4,732,000	212.0
							10,621,000	87.3
							.....	132.8

*Information Provided in Tabulation*

The first thing that I would like to direct your attention to on this tabulation, is the information summarized from the balance sheets. You will note on the tabulation that the total assets have been shown for each company, also the gross and the net property accounts, the difference between the gross and net being the reserves already charged off. You will note from this tabulation, that the tabulation on the upper half of the sheet is for the five-year period prior to the depression embracing the years 1925 to 1929. All of the figures on this tabulation are the average figures for the respective periods.

The ratio of the net property account to the gross property account shown is not particularly informative, due to the fact that the property account covers a wide diversity of property, some of which is not subject to depreciation and some of it subject to depletion. The figure has been shown just for comparative purposes.

It is interesting to me to note the change in the relative gross and net figures in the two periods, and also to note the small fluctuation in some of the companies and the large change in the two periods in other of the companies. The change in the average for the ten companies was a decrease in the ratio of net to gross of approximately eight per cent during the two periods. You will note that the net to gross varies from approximately fifty per cent up to over eighty per cent.

*The Ratio of Capital Assets to Total Assets*

The real part on the balance sheet comparison that I want to call to your attention, however, is the importance of the capital asset account in relation to the total assets. Some of the companies carry the gross capital assets on the asset side of the balance sheet, but most of them carry the net property account, so for purposes of comparison, I have compared the net property account with the total assets including the property account.

You will note from this, possibly with some surprise, if you have not previously made such a comparison, that the average for the ten companies selected in both of the periods, indicates that the capital assets are approximately half of the total assets owned by the respective companies. Please understand that these total assets have not been reduced for any outstanding obligations or for any reserves other than the reserves applicable to the capital assets. If net worth were considered, the ratio of the capital assets would be somewhat

higher. I would also call your attention to the fact that there is considerable fluctuation, but the lowest of the averages of any one of the ten companies, was approximately thirty per cent, whereas the ratio on one of the steel companies, averaged seventy-five per cent. If these ten companies are representative of the general industrial companies, as I believe they may well be, then when we are talking of the control of the capital asset account, we are talking of the control of more than fifty per cent of the total assets owned by the companies. I think that this illustrates rather concretely to you the importance of the subject.

Again referring to the tabulation, your attention is called to the fact that from the published operating statements, there has been compiled for each period, three figures: (1) the total annual depreciation and depletion charge; (2) the total average annual sales; and (3) the total net income, which net income is after depreciation and depletion.

#### *Annual Depreciation to Gross Asset Values*

From these statements have been computed certain ratios which are believed pertinent in indicating the relative importance of the depreciation and depletion charges arising from the use of the capital assets in the business. The first comparison made, you will note, is a comparison of the depreciation and depletion charge to the gross capital assets account. In the earliest period, that is, during the period prior to the present depression, you will note the depreciation and depletion ranges from 1.6% per year to 9.1%, with an average for the ten companies of 5.4%. These averages, again, are the averages of the ratios and not of the dollars figures, so as to avoid undue distortion.

During the depression, the average annual depreciation and depletion ranged, you will note, from 1.7% to 6.8%, with an average for the ten companies of 4.5%. It is necessary, of course, again to realize that the depreciation and depletion provision is not truly comparable with the gross capital assets, due to the inclusion of certain property that is not subject to depreciation or depletion, but I think it does serve, by this comparison, to illustrate the wide fluctuation in different companies, of the depreciation and depletion policy as shown by the published reports.

#### *Annual Depreciation to Annual Sales*

The next point I desire to call attention to, is the comparison of depreciation and depletion to the average annual sales. During the

good business period prior to the depression, the depreciation and depletion charge ranged from 1% to 6.6% of the total sales, with an average for the ten companies of 3.1%. For the average of the six years during the depression, the depreciation and depletion charge in comparison with sales, ranged from 1.1% to 10.5%, with an average for the ten companies of 5.6%. In other words, the depreciation and depletion for the ten companies averaged 3¢ per dollar of sales during the period of good business, and nearly 6¢ per dollar of sales during the depression period, and the individual companies ranged from 1¢ per dollar of sales to something over 10¢ per dollar of sales. I believe that these figures will illustrate concretely to you, the importance of the depreciation and depletion charges as an element of cost to most concerns.

#### *Annual Depreciation to Net Income*

The next point is a comparison of the annual average depreciation charges and the net income, which net income is after depreciation has been deducted. You will note during the profitable period of good operations, that the range of the depreciation to net income ratios was from a low of 11.1% to a high of 967%, with an average for the ten companies of 481%. During the depression period, four of the ten companies had an average loss for the period, so that a comparison could not be made, but for the remaining six companies, the depreciation and depletion ranged from 35.5% to 265% of net income, with an average of 132%.

In other words, the average for the ten companies in the period of good business, and presumably good profits before the depression, indicated that depreciation and depletion amounted to nearly half of the amount available as net income, and during the depression period the depreciation and depletion was substantially more than the profits available after depreciation and depletion. To put the figures in another way, during the period of profitable business the provision for depreciation and depletion took nearly one-third of the earnings before such charges, and during the depression period, took substantially more than half of the income before depreciation provisions.

I submit that where the depreciation is such a large factor in comparison with earnings after depreciation, that it is extremely important for the management and for the stockholders that depreciation be under proper control. If the depreciation is understated, it is entirely possible that dividends may be in part paid out of surplus

or capital instead of current earnings as may be intended. On the other hand, earnings may be understated to the possible disadvantage of the management or the stockholders, if more is provided than required by the useful life of the assets. The larger the extent of the capital assets in relation to the total assets and the greater the depreciation charge in comparison with the other charges, the more important is the proper control of the asset accounts and the charges resulting therefrom.

### *Lax Depreciation Accounting Has Prevailed in Past*

It is my opinion that the proper control of the plant account and its charges is today as important from the standpoint of management, stockholders and federal and state regulating requirements as for tax requirements. There has probably in the past been more juggling or adjusting of the property accounts and their charges to meet matters of expediency than on any of the other property accounts. Such practices are still going on but to a lesser degree than formerly, due to various factors. Some of you may discount this statement, but I have seen more than one accountant express amazement at the property facts when properly set before them.

I have seen hundreds of thousands of dollars on the property accounts where the assets were no longer in existence. I have seen plant accounts supported by very detailed item records of costs compiled with the most meticulous care, where there had never been a serious attempt to determine whether the property was still in existence or not. I have seen property accounts maintained at a constant figure year after year, regardless of additions or retirements. I have seen depreciation charges arbitrarily increased or decreased, depending upon whether profits were large or small.

So much for the importance of the problem which we are discussing.

### *Appraisal Service and Plant Asset Accounting*

There has been some disposition on the part of cost men and accountants to oppose any appraisal service in connection with plant accounts or capital assets. I think that the opposition may be as much the responsibility of the appraisers as the lack of appreciation of the service that the appraisers could be in the proper control of the capital assets. Let us look for a minute at just what the problem is. In the first place, let me say that I am not now concerned with replacement or current appraisal values. We are discussing the ac-

counting procedures for capital assets. Current values may have their proper place on the property account of certain companies, but I am limiting my discussion today to the control of the capital assets on the basis of the book accounts.

### *Why Do Book Figures so Seldom Agree with Assets in Use?*

Primarily, the capital assets as recorded on the books, whatever the basis of value, should, in my opinion, agree with the assets actually in existence, and used or useful to the business. I do not think that there is a man here that would disagree with that premise. In other words, the property accounts should record the cost or other basis of the property which they purport to control. There are too many companies where there is absolutely no attempt made to in any way verify, year after year, as to whether there is any relationship between the actual property and the accounts. Usually, plant accounts are the result of capitalizing of expenditures based on an audit or examination of the bills and purchases. No verification that the property was actually installed, or is in use, is made. No check is made as to whether additional assets were acquired or additional expenditures made over and above the invoices earmarked as capital. Too often there is no adequate report made to the accounting department as to retirements, or if made, the accounting department cannot find the original costs in order to properly eliminate same from the accounts.

I have seen hundreds of concerns eliminate from the costs and reserves, all property that was fully reserved at the average rates used. For instance, if a ten per cent rate was used, the cost of all property is fully reserved and eliminated from the accounts, if acquired more than ten years previously. It would certainly be a miracle if an inventory of the assets happened to agree with the books in such a case. If selling prices are based on costs including depreciation, it would also be a coincidence if the costs were correct.

### *Requirements for Adequate Control*

In order to have an adequate control of the costs on the books, it is necessary that there be some form of adequate description to indicate what particular unit was acquired for certain dollars of expenditure. The second requirement is that there be some method adopted for a periodical check or verification of the continuing existence and use of the property.

*Average Depreciation Rates*

Regarding depreciation, the common practice in the past, and still advocated by many accountants and cost men, was to adopt an average rate of depreciation. In the old days, the average rate was quite often applied to the entire property account, although sometimes the land was taken out. As the income tax requirements concentrated attention on depreciation, there was an attempt to further segregate or break down the cost to such groups as buildings, machinery, automobiles, office furniture and fixtures and certain special groups such as patterns, tools, etc. An average rate was applied to each of these groups and the average was determined, usually without any real attempt to ascertain the proper useful life of the property, operating conditions, or without any definite instructions as to how expenditures in the future for maintenance, repair or replacement of the property were to be handled.

The usual practice was to fix a rate, depending upon the wishes of the management or what some other concern in the industry might have been using. For instance, buildings, if they happen to be brick or concrete, might be depreciated at two per cent per year, including not only permanent construction but also building equipment such as plumbing, heating, building elevators and similar costs capitalized in the building account. If, twenty years after the building was erected, some alteration or improvement expenditures were made which would not extend the useful life of the building, they would still be capitalized in the building account and depreciated at two per cent per year. For machinery and equipment, the usual practice seemed to be to select some figures that looked easy, such as five, ten, or twenty per cent.

*Average Rates as Usually Computed Not Satisfactory*

Personally, it is my opinion that the commonly adopted method of average rate computations for depreciation is not satisfactory for plant asset control purposes. This opinion is not due to the fact that proper accounts cannot be maintained with average rate computations, for they can, providing the average rates are properly determined. With relatively few exceptions, however, there has been little attempt to determine proper averages. Among the exceptions, I would specifically mention the utility companies. The utility companies have made very careful studies of life expectancies, and the amount of maintenance and replacements and have compiled prop-

erty weighted lives in order to determine and support proper averages. For the average manufacturing concern, this has not been done. A manufacturing plant is made up of many kinds and types of property with a wide range of useful life expectancies. It is rare that all of the equipment will wear out or be repaired at the same time.

Irrespective of any factors of obsolescence, there is only one way that I know to intelligently arrive at an average rate. That is to consider at least all of the major equipment; to consider its proper useful life after allowing for the methods to be followed in handling maintenance and repair charges, and then to weight out an average rate based upon the investment and the estimated life determined. If this policy is pursued, I take no issue on the use of average rates. If the average is properly determined and the property is utilized for approximately its normal life, the cost will be recovered by this method.

#### *Average Rate Must Be Changed as New Assets Added*

However, I do call to your attention that the average industrial property is constantly changing. New property is being added, existing property is being retired due to special obsolescence, changes in production requirements or similar factors, and accordingly, if an average rate is being used, you must constantly adjust or check the average in accordance with the changes in the assets.

To illustrate this by a specific example, I would cite an investigation recently made of a rather large plant, involving a machinery and equipment account of several millions. The average life of the machinery and equipment in accord with the inventory of property some five years ago showed an average weighted life of about thirty years. Their additions for a five-year period were also available and, based upon individual consideration of the life of various units, we found that the average life of the additions made in one of the years was a trifle less than eight years. This was the shortest average life on the additions in any one of the five years. Another year the additions showed an average expectancy of useful life of an average of eighteen years. This was considerable of a spread and has a considerable effect on the average rate that should apply to the assets in existence five years subsequent to the original date. The products had not changed but the company had installed different types of machines having a materially different useful life.

Where an average rate is used, it is necessary to constantly check

and change the average rate if the property being acquired from year to year has an average life at variance with prior existing property. In my experience, most concerns make no attempt, once having established an average rate, to make such check or correction and, accordingly, the depreciation reserve gradually becomes out of control.

### *Handling Retirements Under Average Rate*

There is another objection to the use of average rates, that is the handling of retirements. With average rate computations, the presumption is that the item upon retirement has been fully reserved and should be eliminated at its cost from both the gross property account and the reserve, with no loss in connection with the retirement. A question to be determined at the time of retirement is, "Has the property lasted its normal life?" If you have the record of your original estimate for the particular unit, you can determine this fact and can make any required adjustment, but, if you do not have your calculation of the averages, you have no means of knowing whether the item has lasted its normal life and whether there is any adjustment that should be made to the profit and loss in connection with the retirement.

It is wrong, in my judgment, to compute a profit and loss, when an average rate is used embracing property having varied expectancy of life, by applying the average rate to the individual items. Naturally, the property having the shortest life in making up the average, comes out first and, if the average is properly determined, it is fully reserved. In order to maintain a proper control of plant assets, it is my belief that the only satisfactory way is to use an item control for most accounts, or at least a very limited group control. There are several reasons for this recommendation, but the principal one is that it is only by this method in most concerns that individual consideration will be given to the proper determination of depreciation. By taking each major unit and considering the proposed use in the department, the life of related equipment and the character of the particular assets, a reasonable estimate of probable useful life can be determined, with a reasonable assurance that the depreciation will provide for retiring the item over its useful life. With such a system, it is also possible to adjust the life and depreciation charge when changing conditions either extend or shorten the probable life, either of one major unit or of the units in an entire department.

*Cost of Item Control*

The principal objection that is offered to an item control is that it is too expensive and too much trouble. I disagree with this premise. With a properly conceived record, an item control can be maintained with no more cost than the ordinary accounting methods. Do not misconstrue this assertion. To maintain any property record that will control the capital assets will involve more attention and some additional cost than most plants give to their capital assets, but, if you are recording your property so that its existence can be checked so that the cost of retirements can be determined and eliminated from the property accounts, then you can maintain this record on item control with individual depreciations just as economically as you can maintain the record under average rates.

*Forms for Item Control*

On pages 133, 134 and 135 are shown two sheets which are adaptable for item control. I would like to have you refer to the one on page 133 which is the detailed inventory record. I am not going to discuss this in detail but you will note that this provides for the recording of the description and cost of a particular item of property. Provision is made to designate the account, department and location of the asset with proper provision for accounting reference. You will note at the bottom of the page, there is a provision for recording the cost, also spaces on the last line for showing the remaining useful life and the year that the item would become fully depreciated. There is also a provision for recording on this sheet the annual depreciation provision.

In maintaining an item control as property is acquired, and its existence checked, the data would be recorded on this sheet which becomes the permanent record of the asset. When the cost is recorded, the useful life is estimated and the cost divided by the number of years of life and the annual provision inserted in the proper place. The year fully depreciated serves to assure that the item will not be depreciated more than its total cost. Once this record is made up, there is no posting to this detailed record except where there are additions or deductions, provision for which is made on the reverse side of the sheet (see page 134), or where there is change in location or a change in the probable life, in which case it would be necessary to change the annual provision. There is no annual posting or computation to be made on this sheet.

## CAPITAL ASSETS AND DEPRECIATION

133

## PROPERTY LEDGER SHEET

[illegible]

**THE AMERICAN APPRAISAL COMPANY**





*Asset Control Sheet*

Now if you will refer to the control sheet, page 135, you will note that this provides for recording the information from the property ledger sheet. The date of acquisition with the page reference is provided with a brief description of the item, its cost, depreciation reserve and balance. Also, the sheet provides for recording the depreciation provision, providing debit, credit and balance columns and at the extreme right, the last year for depreciation. After recording the information on the detailed sheet which would be compiled from the original purchase order, or plant requisition, you would post the item to the control. In other words, in making the addition you would debit the cost and insert the periodic provision for depreciation, and also show the last year for depreciation. It is little more work to record this information on this control than to put it somewhere else in some other ledger record. It is possibly a little more work to make out the detailed sheet, but once you make out the detailed sheet you do have a record that you can identify and can readily compute and determine the adjustments to be made when the property is retired.

*Accounting for Retirements Where Item Control Used*

Now, when you retire an item you have all of the information on the detailed sheet to make the computation. You have the cost, the date of acquisition, the amount of depreciation that has been figured each year, also changes, additions or deductions that have been made and recorded on the back of the sheet. You can then compute the amount of depreciation that has been taken and the amount of cost remaining undepreciated, and know what adjustment must be made to profit and loss after allowance for the amount received, if any. The retirement is posted on the control summary. The cost being credited to the plant account, the amount of depreciation deducted in past years is debited to the reserve and debit entry is made for the periodic provision, taking out of the provision column the amount of annual depreciation on the item. Each year or each period, if the accounting period is less than a year, you can immediately determine the amount of depreciation to be charged by adding the changes to the provision during the year. There is no computation to be made. You are dealing with dollars of depreciation each period and not a rate of depreciation.

This kind of an item control property record will work. I have seen this or a similar record actually in operation in both large and

small companies for periods as far back as twenty years. I have seen many of them operating for the last ten or fifteen years and it does control the plant assets.

### *Federal Taxes and Fixed Asset Control*

I would like to devote the remainder of my time to some discussion of the control of plant assets for federal tax purposes. I am not going into any discussion in detail of the now famous T. D. 4422. Most of you have found out, or are finding out, what this is. I think most concerns are finding that application of T. D. 4422 is accomplishing what it set out to do; namely, to decrease the deduction for depreciation and accordingly increase the taxable income. I recall the many assertions made when the discussion was first promulgated that depreciation rates were not too high, but it has been my observation that most taxpayers have not been able to support their previous average rates and most of them are having a reduction in the rates made. It has been somewhat of a continuing source of amazement to me to find so many concerns and so many accountants still trying to dodge the issue and make some compromise on average rates without any real attempt on their own part to ascertain the factual information.

I am inclined to think that the present trend in corporation taxation is going to force a better accounting for capital assets. There is little question that some form of undistributed income tax will be made effective. In my judgment, this will make the proper determination of depreciation even more important. It may prove rather expensive to have, some two years after the tax year, a deficiency asserted due to excessive depreciation originally claimed. The amount of earnings to be retained in surplus would probably have been determined on the assumption that earnings were correct, so that the depreciation if in part disallowed, would all be subject to the undistributed profits tax and might prove rather expensive for the lack of adequate proof of depreciation allowances. Whatever form corporation taxation may take, there is little likelihood that depreciation will not be a deduction in computing taxable income. Also, I believe that corporation taxes, for several years to come at least, are going to be at relatively high rates. Assuming as is probable, that future taxes will range for both state and federal at from twenty to twenty-five per cent of total income, I say it is rather important that all proper depreciation be taken at the time and on the assets to which it applies.

Basically, I do not disagree with the principles of 4422. They are perfectly sound. The facts should govern, and I believe from observation, that the department is trying to get more facts and less argument. The cause of difficulties that most taxpayers are having is that for some reason they seem adverse to finding the facts. There seems to be a disposition to think that they can get more if they do not know the facts.

CHAIRMAN WALSH: Are there any questions?

J. ROSS SMITH: I understood the speaker to say that it is a relatively simple proposition to determine remaining service life.

MR. HOSSACK: It is.

MR. SMITH: I really believe that many of the accountants would like to know how it should be done.

MR. HOSSACK: In the first place, it should be done by an examination of the property; going out and seeing it. It should be based upon life experience in other plants as well as checked by actual experience with the particular property. Study those available facts, and then use your best judgment.

Do not misunderstand. I do not claim that there is any plan by which you can absolutely predetermine when every item of property is going out of use; but you can, by considering each of the items, determine much more correctly what is a proper rate and a proper remaining life, than you can if you guess at a whole plant account without any real weighting of life and costs of the particular property.

If the average rate is properly determined, you must weight it out; you must estimate the individual lives. If you go to each unit, I think you will get a better result than you will by guessing at the whole account or plant.

FRANCIS I. HEINEN (*Auditor, Freeport Journal-Standard Publishing Co., Freeport, Ill.*): I believe that there is a tendency on the part of accountants to minimize the importance of scrap or residual value in computing the depreciation allowance or deduction.

MR. HOSSACK: Personally, it has been my own experience over a good many years, that if the property is used its normal life, it would probably cost you more to get rid of it than the amount you will get for scrap.

Now when you retire a property prematurely, you may get salvage from it, you may get a secondhand price, but in most companies, if used for a normal life and if you keep track of what it will cost you, you will find it will cost you more to throw the item out than if you left it in the plant.

MR. HEINEN: Then the tendency is quite sound, in your opinion?

MR. HOSSACK: Yes, that is correct. In certain things such as lead, for example, there is a large element of salvage. Where that is true, it should be recognized and depreciation based on the cost, less a reasonable salvage.

CHAIRMAN WALSH: It seems a fallacy to introduce the next speaker because he is so well known to all of you. However, for the benefit of some who have not met him, I am happy to introduce John H. DeVitt, who is Assistant Auditor of the Hammermill Paper Company, Erie, Pennsylvania.

He has been with that company since 1922, first in the engineering and later in the accounting department. He is going to present to you the specific treatment of capital assets on the part of that company. He is going to tell you how they have cut down expenses in keeping capital assets, and those of you who are interested in reducing expense of individual units should listen attentively. It gives me pleasure to introduce Mr. John DeVitt.

## ACCOUNTING PROCEDURE FOR CAPITAL ASSETS AND DEPRECIATION

JOHN H. DEVITT

Assistant to the Auditor, Hammermill Paper Company,  
Erie, Pa.

MY part in this program is to present a case study showing one method of recording property information. I am not going to discuss theory. I will confine myself to presenting what is one approach to the problem. I do not expect to outline a procedure that fits all conditions, nor do I expect that you will agree with my presentation in all the detail, but I do hope that the discussion will stimulate thought on a subject which I believe is both a major responsibility of the accountant and also an opportunity.

Property records were practically legislated into existence by the

income tax statutes. That action by Congress created a new accounting philosophy with respect to fixed assets, which by itself focused attention on the properties. In addition, the ever-increasing mechanization of industry and its subsequent effect on costs, required that even more intelligent attention be given to establishing and developing adequate property records. As a result, we have seen plant ledgers develop from a single ambiguous page in the general ledger to complete systems which provide valuable property information in considerable detail.

### *A Problem of Handling Details*

Any system, regardless of whether it is handwritten, machine posted, or comprised of punched cards has incorporated in it certain basic common fundamentals. The amount of information, the method of arrangement, the supplementary uses of the records are all determined by the peculiar needs of each business. But you can be very sure of this: any property system presents a problem in handling detail. It's a paradoxical situation. To obtain the facts, the detail must be available, but if there is so much detail that it cannot be handled economically, the system collapses of its own weight.

We feel that the problem of detail has been solved through the use of punched card records and our system is set up on that basis. I do not mean to imply that the results come only through the use of punched cards. Any part or all of the data is obtainable through handwritten or machine-posted records. The principles are the same regardless of method. We have just applied the principles to machine accounting operation, so as to obtain benefits inherent in machine accounting procedures.

As I mentioned, our plant ledger is set up on punched cards. Notice that I am careful to avoid making remarks about any particular type of machine. I do not care to discuss the merits of the machines manufactured by the different companies. I leave that mystifying subject to the sales representatives and their confused customers.

### *The Exception Principle*

I will not outline the machine operation except to remind you that one of the fundamental principles of tabulation is this: Once the data is punched in the card there is an indelible, accurate record from which information may be obtained in practically any form or

type of presentation required. As we proceed further, you will see that we have utilized this feature in many ways.

It must be kept in mind that the entire procedure is based on the exception principle. We try to foresee what may be required, but we make no effort to periodically accumulate all the data which is available, except for certain broad phases of the problem. But the system must have and does have the inherent capacity to furnish any information that may be required at any time.

### *The Starting Point*

Obviously there must be a starting point. In our case it was a departmentalized unit appraisal. As a result we had compiled the value of each building and also the value of its equipment, such as lighting, heating, plumbing, etc. We had the detailed values of the roofs, floors and foundations which were a part of the building structure.

Then, on the basis of the square feet of occupancy, we allocated the value of the building to costing centers and established the depreciation burden. By use of this appraisal we had the value of each machine unit in the plant broken down to the appurtenances which were a part of the machine. These included such items as motors, wiring, safety guards and piping.

We knew in which costing centers the machine and its appurtenances belonged and we knew in which building the equipment was located. We had the sound value, we could estimate the remaining years of life, and we had advice and data on depreciation rates. With such a splendid start we could not afford to fumble the ball, and it was definitely up to us to plan and to install a record with which to perpetuate the information we had. In addition, the system had to be sufficiently flexible to be adapted to unforeseen conditions, and it had to be arranged so that we would be in a position to make intelligent answers to questions that might arise in the future.

Above all, it had to be simple, it had to be accurate, and it had to tie into the general books. The last point is most important. If the detailed plant ledger is not in agreement with the control accounts on the general ledger, you have a monument to wasted accounting effort.

### *The Control Plan*

The first step in establishing the control was to create ten general ledger accounts which would keep separate the larger classifications

of property. This setup permitted us to localize any error that might develop in the detail. These accounts included buildings, machinery and equipment, tools and mill fixtures, office furniture and fixtures, and office devices.

Then each general ledger classification was broken down into groups of common equipment. We coined a title for these breakdowns and called them "Asset Account Classifications." For example, the general ledger building account had behind it supplementary account classifications which included plumbing, heating, lighting, main structure floors, and fire protection. The machinery and equipment asset account classifications included steam engines, motors, gear reduction units, motor wiring, safety guards, foundations and piping.

### *Code Numbers for Identification*

Most of this type of equipment was in common use in very nearly all departments of the plant, and in a majority of cases these items were appurtenances to some major machine unit. To incorporate this information on the record it was necessary to create a simple, three-place code. For example, building lighting was 106. The first figure in the code identified the asset account classification as a building general ledger control, and the last two figures identified the breakdown.

In the machinery and equipment account, code 230 was motors. Again the first figure identified the account classification as a machinery and equipment general ledger control, and the last two figures identified the breakdown. By sorting and controlling the cards by the first figure in the asset account classification code, we were able to tie in the detail record with the general ledger.

### *Combining the Equipment and Operating Codes*

Then, to allocate depreciation and have the means of identifying the equipment, it was necessary to create a combined operating and equipment code. And speaking parenthetically, when I say identify, I mean identify. In a plant of any size there is usually such a conglomeration of equipment that unless the property record really has the ability to identify and locate the equipment, you may as well toss the record out the window. We developed a simple, six-place operating and equipment code arranged in process order which fitted into the cost and budget system, and also located the various items of equipment in the plant.

In this code the first figure identifies the manufacturing division, such as paper mill, sulphite mill, finishing, power, etc. The second figure represents the department within the division. The next two figures identify the costing center within the department and the last two figures identify the machine which is located within the costing center.

### *Use of Code Numbers*

To make the point a little clearer, let me give you this example. On our records, 25-05-12 is a machine in the Paper Mill Division, Machining Department, No. 5 Paper Machine Costing Center, and it is a stock pump to the beater chest. In addition, it has some appurtenances which make it a complete operating unit. It has a motor, belting, foundations, safety guards, wiring, machine walkways and piping. Here is where the three-digit asset account classification code comes into the picture. You see that we are able to tie up the appurtenances which are a part of the unit with the equipment code itself.

We then punched the building number into the card (Exhibit I, page 144) in columns 18 to 22, inclusive. This shows the main building, the annex, if any, and the floor. I think you will agree the identification is fairly complete, and that we have the mechanism to keep the detail record in agreement with the general ledger.

### *Value of Codes*

Now just a word about codes. While codification of the accounts is a well-established principle in many plants, those companies which have never used it sometimes run up against the defense mechanism of those unaccustomed to codes. Don't let that worry you. When we first started codifying, quite a number of years back, there was weeping and wailing and gnashing of teeth throughout most of the operating departments. It was loudly contended that people would never learn the codes; they would result in confusion, and the whole idea was just a crackpot accountant's scheme. We spent a small amount of money in stenciling the equipment numbers on the machines, and in a relatively short space of time we got our money back in the time saved by the operating people in using the code instead of laboriously writing out the titles of the accounts. And in addition, and far more important, we eliminated a lot of misidentification.

I have attempted to outline the chronological background which



tended the beginning of the system. I want to skip the intervening years and discuss the operation of the record as of today. To spend my time on the interim period would simply be a recitation of refinements. Then, too, I am spared the pain of relating and remembering some of the grief which was our lot during the formative period.

### *Need for and Desirability of Unitary Records*

We have what is generally termed a unitary record, which is set up in considerable detail. Why? One reason is because management should look upon depreciation as a matter of fact, rather than expediency or blind guesswork. So we segregate the machinery as to type of equipment and type of service, take into account as nearly as possible all the factors, including normal obsolescence, which permit a more accurate determination of the depreciation rate. Then depreciation can be taken on individual items rather than on a composite-rate basis.

It certainly is obvious that machinery operating at high speeds under severe load service should take a higher rate than equipment which is heavy, slow-moving and running under less severe conditions. Likewise, piping in corrosive service should have a higher rate than piping handling pure water.

Entirely aside from the tax angle, the question of good cost accounting comes into the picture. In those industries where the properties represent seventy-five to eighty-five per cent of the total assets, the method of determining and allocating depreciation burden should receive major consideration by the management.

### *Checking Depreciation Rates*

In setting the depreciation rates on individual machines, there are, of course, authorities you can consult. You can temper their findings with your own intimate knowledge of your plant conditions, and a rate can be established which takes into consideration all the known factors. But after that, there is the problem of verifying the rate in actual practice. Unfortunately there is no such thing as a static depreciation rate. Therefore, the rate must be subjected to periodic check to establish its validity.

One method of checking the rate is to review the eliminations. As removals occur in the plant the ledger cards covering these items are removed from the active file, proper accounting treatment made, and the cards transferred to an elimination file. Then as the years pass, we are able to take the elimination cards covering removals and

analyze them to see how close the original rate worked out in practice. The cards carry the complete history of the machine, and we are able to make intelligent adjustments of the rates, if required. Because the records are punched cards we are able to utilize machinery in doing what would otherwise be a tedious task. (See Exhibit II.)

Of course we cannot wait for five, ten or fifteen years to pass before we check the rates. By that time we might learn that we have given the plant away. So the plant accountant periodically checks the physical condition of certain doubtful classes of equipment against the accrued reserve, to see if the rate is too high or too low.

#### *Use of Punched Cards in Preventing Overaccrual*

When the property record is on a unitary basis, it is necessary to guard against the overaccrual of depreciation. That is handled as follows: the punching fields shown in columns 1 to 7, inclusive of Exhibit I, provide the mechanism for expiring dates. Let us assume that an asset is acquired in 1936, and has a five per cent rate. That asset will become fully depreciated in 1956, and a 6 would be punched in column 5.

At the end of any year when the annual depreciation provision is being established, a selective sort on one of the columns in the field will pull out all the assets expiring in the year in question. So you see that it is impossible to overaccrue on the item.

For example, a selective sort on sixes in column 3 will pull out all the assets expiring in 1936. Or a selective sort on sixes in column 4 will pull out all the assets expiring in 1946, without disturbing the order of the cards in the file.

#### *Forecasting Asset Life Expectancy*

There is another advantage. With the expiring date punched in the card it is possible to make a long-range forecast of the life expectancy of the assets, either in total, by classes of equipment, departments or in any way required. This can also be used as a basis for long-term budgeting modified, of course, by estimates for removals and additions.

Whenever property items which have not been physically removed from the plant or definitely abandoned become fully depreciated, the card is pulled from the file during the year in which the asset expires, and an "x" is punched in column 8. The depreciation provision for the year is adjusted so that the reserve balances with the

## CAPITAL ASSETS AND DEPRECIATION

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## EXHIBIT II

## RETIREMENT ANALYSIS

AS OF DEC. 31, 1935

ASSUMING BASIC DATE DEC. 31, 1930

Acct. Class Code	Identification & Control			Fully Depreciated		Retirements Not Fully Depreciated		Computation of Loss		Sound Value Or Loss At Removal*
	Machine Unit	Year Acquired	Dep. Rate %	Total Value Retirement	Retirements	Retirements Depreciated	Year Removed *	Cost Factor Value	Yearly Depreciation	
272	11-05-12	29	20%	120000	120000		35			
272	11-09-16	30	20%	180000	180000		35			
272	26-05-12	32	20%	350000		350000		420000	70000	210000
272	26-05-20	32	20%	200000		200000		240000	40000	80000
272	42-01-06	28	16.7%	160000	160000		34			
				Total Loss						290000
All columns printed on machine except those indicated with *.										

Problem: Verify depreciation rate on machinery removed in Asset Account Classification #272.

Summary: Rate appears to be o.k., except in Dept. #26.

Action Indicated: Investigate conditions in Dept. 26, to see if loss is created/Result of obsolescence or type of service under which machine is operating.

total original cost of the item and the cards are returned to the active file. If and when the item is removed or abandoned from service, the card is pulled from the active file and the proper accounting entries made.

Using the "x" on the card and the class selector on the tabulator, these items can be eliminated from reports even though they are in the active file, without the necessity of extra handling or maintaining a separate file. Or, if desired, and using the same principle, all the cards in the file can be run through the tabulator and only the information relative to fully depreciated assets obtained.

You will observe that the annual depreciation rate is punched in the card. We do this for two reasons. First, with the rate in the card, the amount of investment at the various rates can be established for tax analysis and rate study. Secondly, the process of calculating and verifying the annual depreciation on each item is simplified and clerical work reduced by using the features of punched-card equipment.

### *Importance of Date of Acquisition*

One of the most important points to be incorporated into the plant ledger is, of course, the date of acquisition. I will bet all the tea in China that there are a lot of you wishing right now that the dates of acquisition were available for all of your properties. There would be less need for worrying about retrospective appraisals and rehearsing of plaintive appeals to the Internal Revenue Department.

Incidentally, it is not cheering to know that less attention will be given to oratory and theory by the department in the future. What they demand are facts. You will note that the card establishes the acquisition date, and by punching the date into the card we are in a position to take off data which is rather difficult to obtain with the more conventional types of records. For example, it is possible to establish a trend of investment in plant facilities by asset account classifications, cost centers, departments or divisions, from any starting point within the scope of the record.

### *Suggested Method for Determining Monthly Depreciation Entries*

Some types of plant records require that depreciation allocations to costs be calculated and then posted on a property record, and an additional calculation be made to establish the accrued reserve and the sound value for the current year. Then the cards must be manually adjusted for retirements and additions. In those cases

where the depreciation provision is taken off the cards monthly, it means that this performance has to be duplicated eleven times during the year. I suggest an alternative procedure.

The monthly depreciation charge for cost purposes can be made by tabulating the cards at the beginning of the year and the total annual charge obtained for each costing center. These figures should be adjusted by estimates of the effect that removals, additions and fully depreciated assets will have on the depreciation for the coming year.

Then the amount obtained can be divided by the number of costing periods, usually twelve, and this information becomes the basis of a standard journal voucher which is put through the accounts each month. When the final treatment for removals and additions has been made, it is a simple matter to make an adjusting journal voucher to correct the provision for the entire year.

In case you think that the method is not accurate enough, you will be interested to know that our depreciation estimate was within three hundred dollars of the final adjusted charge for the year 1935. I think, too, that it is a waste of time to figure depreciation in terms of dollars and cents. You will note that we express depreciation burden in terms of dollars only. It seems perfectly absurd to go to the extra clerical cost of calculating depreciation down to the nearest cent, when we consider that the provision extends over a considerable period of time, and that it is impossible to set up a rate which will expire the asset on the books at the exact time that the item becomes obsolete or is removed. Cutting off the cents cuts off extra work in balancing.

When T. D. 4422 was issued, thereby causing extreme pain and anguish to those who thought that depreciation was only a fanciful term, the need for analyzing depreciation reserves was given additional impetus. A punched-card record makes a sound value and reserve analysis a relatively easy task. There is nothing particularly new or original about the procedure. The first point is that the application of the exception principle eliminates the necessity of maintaining individual reserve calculations currently.

### *Cost Factor Value*

If you refer to the card, Exhibit I, columns 65 to 72, inclusive, you will find a field called "Cost Factor Value." The sole purpose of that field is to establish the sound value of the asset or groups of assets at any time. Permit me to impress upon you that the cost

factor value is not a book figure, but is only a statistical starting point which has the effect of reducing the acquisition dates to a common denominator.

It is first necessary to establish what is called a basic date, and in our case the basic date is December 31, 1931. This basic date is really a static point on which all future reserve and sound value calculations are based. When the date has been set—and it can be any date on or prior to the actual date of creating the record—the information punched in this field represents the book or sound value at that time. The difference between the cost and the book value is of course the amount credited to reserve for depreciation.

As additions come into the plant subsequent to the basic date, there must be a calculation on each item. This permits the automatic calculation of the sound value at any time, whether it be for one item, asset account classification, costing center, division or entire plant. The operation consists of multiplying the annual depreciation in dollars by the number of years elapsed since the basic date and the date of acquiring the addition, adding this amount to the cost and punching the result in the cost factor field. This operation can be done manually or automatically with the multiplying punch.

We do not do this work because we have nothing else to do. This phase of the property record fills a very definite need. Sound financial management requires current knowledge with respect to the sound value and accrued reserves. If all the acquisition dates are available, this method offers a simplified approach to the problem of reallocating reserves.

### *Anticipating Future Extraordinary Charges*

Sometimes a situation is created wherein an appropriation to cover the cost of new equipment to replace existing property would not reflect the amount of capital loss that is going to be sustained by the company through realized depreciation not covered by reserves. If the equipment is replaced and the original cost has not been entirely recovered through depreciation, there may be a charge to profit and loss or surplus, that will rock the management.

If there is going to be a loss, it should be ascertained prior to a decision so that management can give proper evaluation to it in any plans that they may have. With the proper record this analysis can become routine. It will not hurt your reputation as an accounting executive if you act as a lookout and sound warnings of breakers ahead.

## EXHIBIT III

METHOD OF DETERMINING NET  
BOOK VALUE AT DEC. 31, 1941

Following example illustrates method of establishing Cost Factor Value of Additions on individual cards, entering the Asset Accounts subsequent to basic date.

COST FACTOR METHOD (Basic Date - Dec. 31, 1931)						
1 Date Acquired	2 Original Cost	3 Annual Depreciation Rate in %	4 Annual Depreciation In Dollars	5 No. Yrs. Since Basic Date	6 Annual Depreciation In Dollars X Years Since Basic Date	7 Original Cost Plus Time Factor Col. 2 + 6 = 7 Cost Factor Value
6-30-32	10000	5.0	500	10	250	10250
6-30-33	50000	10.0	5000	10	7500	57500
6-30-34	100000	10.0	10000	20	25000	125000
6-30-35	80000	12.5	10000	30	35000	115000
6-30-36	20000	15.0	3000	40	15000	35000
6-30-37	90000	10.0	9000	50	45000	135000
6-30-38	30000	4.0	1200	60	7200	37200
6-30-39	5000	10.0	500	70	3750	8750
6-30-40	500000	10.0	50000	80	425000	925000
Totals	885000		89200		567300	1452300

## Formula for Net Book Value

F = Cost Factor Value

D = Annual Depreciation in Dollars

N = Number of years elapsed since basic date

Net Book Value = F - (DN)

Example: Establish Net Book Value on above items at Dec. 31, 1941.

Date of Determination Dec. 31, 1941

Basic Date Dec. 31, 1931

Elapsed Years 10

Then running cards through machine produces totals in columns 2, 4, 6, &amp; 7.

Factor Value (Per above Col. 7) 14523.00

Annual Depreciation in Dollars (Col. 4) 8920.00

X Elapsed Years from Basic Date (10) 89200.00

Difference = Net Book Value at Dec. 31, 1941

5603.00



Exhibit IV illustrates a routine report which is made possible by having current information available with respect to the properties. I am not going to take the time to go into the mechanics of the operation, as I think that Exhibit III clarifies the procedure, but I do want to emphasize the point that the accumulation of the data is a machine job which releases clerical time and effort.

Again, time does not permit a detailed explanation of all the fields which appear on the card, nor do I think that it is necessary to go over them one by one, because most of them are self-explanatory. So I will skip over the more apparent points and concentrate on the highlights.

#### *Method of Adjusting Property Values*

I am not going to discuss the effect of asset revaluations, but I will suggest a proven mechanical method of adjusting the original values. Let us assume that a company has reached a point where it is necessary to adjust the property values in line with current conditions. It may be either way. You may wish to reduce the plant values and charge surplus, or you may wish to restore the values and create an appreciation surplus.

Personally, I prefer to talk about reductions because write-ups seem to be in ill repute at the present. If one attempts to write up plant values in this somewhat hectic age, and particularly when considering the federal securities legislation, he runs the risk of acquiring a number, a round haircut, and a semi-permanent residence in one of the exclusive state or federal stone mansions scattered about the country.

Ordinarily, the property adjustment would require the services of an appraisal company to review the assets, determine the physical depreciation and establish the new reproductive values. With a detail property ledger, it is possible to segregate the asset account classifications and apply against them a per cent of reduction equal to the decline in the commodity price index of the particular product or type of equipment. The commodity prices could be obtained from an appraisal company, or possibly from the company records.

This method also assumes that the physical depreciation of the asset requires no adjustment of the remaining years of life, or that you are in a position to solve this problem with your own staff. Using a multiplying punch, the tremendous task of adjusting each card for the new values, reserve, depreciation, cost factor value, etc.,

can be done in a minimum of time and with relatively little clerical expense.

### *Plant Values for Insurance Purposes*

We are familiar with the necessity of plant values for insurance purposes. Conventional plant records usually require an additional record for insurance values. This is necessary because sometimes there are a multiplicity of costing centers located in one building, or, on the other hand, a costing center may have equipment scattered through several buildings. Insurance statistics are based on the value of an individual building and its contents.

By examining the card form you will see that the location of each piece of equipment is identified by the building code or an identifying prefix which shows that the equipment is in the yard or located outside the main plant. With this setup the cards can be sorted by building number, and the value of the building and its contents established. By using the cost factor value the book value can be introduced into the picture. So you see that we eliminate the necessity of maintaining a separate insurance record. (See Exhibit V.)

The non-insurable items are automatically excluded in this manner. All items of property above ground, and therefore subject to fire hazard, have an "o" punched in column 10. Foundations, piping below ground, conduits, sewers, and other items having negligible fire risk have an "x" punched in column 10. By using the class selector on the tabulator the non-insurable items are automatically excluded without disturbing the order of the cards or making it necessary to do manual or machine sorting.

In establishing a proof of loss after a fire, detailed records protect you against the loss of small items which might otherwise be overlooked. I think you will agree that the card contains all the necessary information on one record without losing advantages which might be supposed to accrue from individual departmentalized and insurance records. In fact, one purpose supplements the other, so that the punched card is really more desirable.

### *Other Uses for Unitary Records*

I am not going to discuss the application of plant records to tax problems. The requirements of T.D. 4422 are generally well known to most accountants, and there has been so much presented and available on the subject that I would only duplicate what has been offered. I do want, however, to make the general observation that I believe

EXHIBIT V

## ANALYSIS OF INSURABLE PROPERTIES

AS OF

DECEMBER 31, 1935

Assuming Basic Date Dec. 31, 1930

TOTAL INVESTMENT				INSURABLE INVESTMENT							
Bldg. No. and Annex	Con- trol	Yr. of Acq	Total Asset Value	Value of Insurance Exclusions	Value of Insurance Inclusions	Insurable Fully Depreciated Inclusions	Insurable Not Fully Depreciated	Cost Factor Value	Sound Value Assets Not Fully Depreciated Yearly Depreciation	Sound Value Assets Fully Depreciated	Total Reserve Accrued For All Insurance Inclusions
21 00 1	1	20	10000000	500000	9500000	500000	9000000	5400000	3600000	3600000	59000000
21 00 2	2	30	15000000	150000	13500000		13500000	13230000	540000	10530000	2970000
21 00 3	3	35	5000000		5000000		5000000	5900000	200000	4900000	1000000
21 00 4	4	20	500000000	500000	495000000	200000000	295000000	202075000	88500000	157825000	337175000
21 00 5	5	30	50000000		50000000		50000000	48750000	2500000	36250000	13750000
21 00 6	6	32	5000000		5000000		5000000	5750000	500000	3250000	1750000
21 00 7	7	26	1000000		1000000	1000000					1000000
21 00 8	8	34	500000		500000		500000	650000	100000	350000	150000
21 00 9	9		676500000	11500000	665000000	206000000	459000000	330555000	162900000	249105000	415995000

NOTE: The above information obtained for insurance purposes is printed by machine with the exception of the two right hand columns, which are manually calculated.

that if unitary plant records were used in larger degree than at present, there would be less cause for tax squabbles.

The plant record, in addition to controlling the dollars of property, has also paid dividends through what might be termed by-product uses. For example, it has helped in controlling maintenance costs. By applying the cost of maintenance against the value of individual machines and classes of equipment, a percentage relationship was established which indicated startling trends and pointed the way to beneficial changes in operating and purchasing policy.

Attention was directed to the matter of idle plant, which resulted in more accurate costing and in some cases the liquidation and sale of unused machinery. Obsolete equipment was brought to light, and operating and maintenance charges reduced. One of the most important things accomplished was a more intelligent understanding and a better attitude towards depreciation burden on the part of the operating people.

#### *Is Depreciation Non-Controllable?*

Depreciation has often been referred to as a non-controllable expense of department heads, foremen and superintendents. I can not entirely agree with this premise, although I admit that in some cases the matter of depreciation burden is out of the hands of the operating people. But I do believe that a broader perspective and a more intelligent knowledge of depreciation costs on the part of superintendents and foremen can help to reduce and control this item.

Some people have the naive idea that because the plant is composed of bricks, steel and machinery, fixed assets are things which are not subject to pilferage. Nothing could be further from the truth. There are innumerable items not nailed down which disappear in the course of time, and some of them unquestionably get out through the gates. The plant ledger should be and is a watchdog over property dollars which are likely to take wings and fly away if not properly guarded. The record permits a periodic verification of the existence of the item and occasionally proves the fallacy of the belief that once a machine gets into the plant it is permanently anchored there.

#### *Handling Detail for Current Additions*

There may be a question as to how the detail is handled for current additions. I refer you to Exhibits VI and VII. You will note that the total cost sheet is designed for accumulating the charges





through punched cards. When the project is completed the plant accountant analyzes the job, breaks it down into the property detail which is assembled on the completion report. The cards are written and punched from this record, and after verification and calculation go into the property file. Of course the current addition cards are balanced with the general ledger controls before they are placed in the active file. You might be interested to know that the detail record has never been out of balance with the general ledger at any time, nor has there been any necessity of making arbitrary adjusting entries.

You see that back of the plant ledger card is the complete detail and record of the addition and its treatment in the accounts. The matter of having complete detail in regard to the addition is very important when establishing the original cost of items removed in subsequent years.

Usually the ledger card is sufficient, but if not, we have the detail. If you do not have the information available, you must depend on engineering estimates. In spite of, or perhaps because of, the fact that I once worked on a drawing board, I must confess to a somewhat cynical attitude towards the accuracy of this type of estimates.

### *Cost of Keeping Plant Records*

Now finally, we get down to the cost of keeping the record. That is an important point in any system setup. In the first place, I do not believe that a plant record by itself justifies, generally speaking, a tabulating installation, unless there is considerable volume. Rather, I look upon the installation on machines as a sort of side line in the average plant. The work usually can be so scheduled and directed that it can be done in what would be the otherwise spare time of the operators and machines. That is not true in all instances, but where applicable it offers an opportunity to help liquidate the rental.

In our plant we have one man on this work. He is a specialist and handles the entire routine with the exception of the punching and operating of the machines. The job requires only about sixty-five per cent of his time, and he is free for other duties.

### *Summary of Results Obtainable*

Summarizing, the objective of a plant ledger is the control of property dollars and its related problems. The full accomplishment of that objective rests upon careful, detailed analyses of the properties. These analyses in turn are predicated on factual, accurate

information which comes only through complete, comprehensive records which substitute facts for opinions. The effort required to handle detail suggests the aid of machine accounting as at least one approach to the problem. I feel that a property record installation on machines results in:

1. Complete factual data being available in practically any form required.
2. Accuracy.
3. Speed.
4. Confidence in the figures presented.
5. Less effort.
6. Low cost of operation.

The accountant's responsibility with respect to accounting for fixed capital assets has long been recognized and well defined. That responsibility has not diminished with the years, rather it has grown in stature and scope. If the accountant assumes that increased responsibility, and what is far more important welcomes and accepts the opportunity, he can readily create a more intelligent and active appreciation of the value of his work.

In the past, management has relied in a great measure upon the accountant, and we can be very sure that it will continue in the future to look to him for new and additional contributions. Even so prosaic a subject as property accounting offers valuable potentialities.

CHAIRMAN WALSH: We do not have much time for questions—I notice you look rather hungry—but I think Mr. DeVitt will be glad to answer any you may have.

J. A. PETRICK (*Cost Accountant, Kellogg Switchboard & Supply Co., Chicago, Ill.*): In looking over this job order completion record, I notice that you do not show any burden in your cost. Am I to assume that you would not include your burden as a part of the cost of the asset made in your plant?

MR. DEVITT: The burden is included in the labor rate of the employees who work on the job. It does not show separately on the Job Order Completion report.

. . . The meeting adjourned at twelve-twenty o'clock. . . .

SESSION IV  
PRESENT-DAY PROBLEMS IN  
INVENTORY VALUATION  
AND CONTROL

WEDNESDAY AFTERNOON, JUNE 24, 1936

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M. B. WALSH, *Chairman*

MAURICE E. PELOUBET was born in Chicago and attended school there, in Butte, Montana, and in East Orange, New Jersey. Entering the employ of Price, Waterhouse & Co., in 1911, he attended the New York University School of Commerce, Accounts and Finance, until his transfer in 1914 to the London office of Price, Waterhouse & Co. Upon his return to the United States in 1919, he became associated with Pogson, Peloubet & Co., and was admitted to partnership in this firm in 1921. Mr. Peloubet is a C. P. A. of New York and New Jersey and a member of the American Institute of Accountants, the National Association of Cost Accountants, the New York State Society of C. P. A.'s, and the New Jersey Society of C. P. A.'s. He is a member of the Council and Chairman of the Board of Examiners of the American Institute of Accountants.

IRVIN GEROFSKI was graduated from the Massachusetts Institute of Technology in 1923. He acquired his early industrial experience in the supervision of production, and in the development and improvement of manufacturing methods and processes in various industries. In 1929 he joined the engineering staff of Scovell, Wellington & Company. At the present time Mr. Gerofski is connected with McKinsey, Wellington & Co., which is the new firm resulting from the merger of the engineering staff of Scovell, Wellington & Co. and James O. McKinsey & Co. His work with these firms has embraced a variety of industrial problems, including engineering studies for the reduction of manufacturing costs, establishment of budgetary control and of standard cost procedures, improvement of office organization and methods, and the determination of price schedules. Mr. Gerofski has made several special organization and financial investigations of companies in the automobile, mechanical refrigeration, radio, and textile industries. He is a director of the Blackstone Plush Mills, Inc., of Clinton, Mass. In 1931 Mr. Gerofski spoke before the Pittsburgh Convention and he has spoken before several chapters of the N. A. C. A. and other professional societies and industrial groups. He is a director of the Boston Chapter.

ROSS G. WALKER was graduated from the University of Michigan in 1920, after having spent some four or five years with the Michigan Central Railroad. He taught for several years at the University of Michigan and at the University of Iowa, before coming to Harvard in 1926. He left the University in 1930 to become the treasurer of the Hamilton Woolen Company, with which concern he had been associated in a consulting capacity for several years. He returned to the University for the academic year 1935-36 and is at present associated with Professor T. H. Sanders in accounting and the general field of production and financial control.

# PRESENT-DAY PROBLEMS IN INVENTORY VALUATION AND CONTROL

PRESIDENT LOHNES: I would like to start this afternoon's session by reading communications from two of my predecessors who I am sure have many friends in this audience:

I regret that I shall be unable to attend the Seventeenth International Cost Conference as an emergency has arisen in our company and I cannot come to Cincinnati. A review of the program of the conference should convince anyone that you will have a splendid convention.

HARRY BULLIS.

Sincere wishes for another grand convention May it be the best the Association has ever held. The program is most attractive, and the technical sessions of timely subjects offer so much that anyone who cannot attend will miss something worthwhile. Extremely sorry that urgent matters make it impossible for me to be present. Best regards to my friends who I relish seeing on these occasions, and best wishes to all who have worked so diligently to keep the National Association of Cost Accountants in its present enviable position.

CHRIS FINNEY.

CHAIRMAN WALSH: We shall now resume the technical discussion. As I announced this morning, we are going to consider inventories this afternoon in various phases. All of us have more or less to do with inventories at some time or other, and perplexing problems in valuation and, in particular, control of inventories have always caused a good deal of perplexity and provided problems.

This afternoon our speakers are going to discuss and bring in some new thoughts with reference to valuation of inventories, and by the same token we hope to provide some new thoughts about the control of inventories. Our two major thoughts are valuation and control of inventories.

The first speaker is a man who has given over a good deal of his time to making a study of inventory valuation. He recently testified before members of Congress in connection with the proposed 1936 Revenue Act. He is a Certified Public Accountant of New York and of New Jersey, and he is in the public practice of accountancy. He is a member of the American Institute of Accountants, and acts as Chairman of the Board of Examiners of that Institute. He is a

Past President of the New Jersey Society of Certified Public Accountants. In 1933 he was a delegate to London at the International Conference of Accountants. The subject of inventory valuation means much to him, and it is with pleasure that I introduce Mr. Maurice Peloubet, of Pogson, Peloubet & Co

## PRESENT-DAY PROBLEMS IN INVENTORY VALUATION

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AFTER many years of discussing accounting problems with clients, government officials and other accountants, I have come to the conclusion that there are generally three questions which are asked when an accounting method or procedure is brought forward for discussion: first, Is it new? second, Is it conservative? and third, Is it theoretical?

When I was first struggling to grasp the rudiments of the profession, I had an idea that if a method could be shown to be something new and original it would count heavily in its favor, but I have long since learned that the most dangerous, not to say damning, thing which could be urged against any method is the taint of originality. The mere hint that any poisonous traces of newness can be found in a method is generally enough to set responsible men against it. You will not, therefore, hear me say anything which is at all novel or original. If anything is said which you have not heard before, it is probably at least fifty years old, has been tried and tested, and has been repeatedly put forward by other speakers and writers. This may detract somewhat from the discussion as entertainment, but will probably increase its usefulness

### *Conservatism and Inventory Valuation*

The answer to the second question as applied to inventory methods is, I think, always consistently, "No." No inventory method can be truly conservative, so far as a statement of income is concerned, over a period of years long enough to cover the natural cycle of the business. An inventory method not well adapted to the industry in which it is used can produce for a single period results which are apparently conservative, but the apparent conservatism—that is,

understatement of income—must be offset in succeeding periods by overstatement of income if the same method is consistently applied.

It is possible for inventories to be written down arbitrarily on the balance sheet so that at all times the balance sheet value may be understated; but even though this procedure were followed, the income accounts must show over the natural cycle of the business the same total profits, no matter how they are distributed between years, provided the inventory method is consistently applied.

### *Is It "Theoretical"?*

I am not always sure what reply is expected when an inquirer asks the third question, *i.e.*, whether or not a particular method or procedure is theoretical. If the inquirer means to ask whether the method is such that, while desirable results will be produced, the labor and cost are disproportionate to the value of the results, I would say that none of the methods which will be discussed are theoretical.

If by theoretical is meant a method which is predicated on assumptions or axioms which must be taken for granted and which have no genuine bearing on the facts under discussion, I would again say that none of the methods to be discussed are theoretical.

"Theoretical" might have one other possible meaning as applied to these methods, and that is, a procedure devised by accountants or others familiar with the abstract principles of accounting but unfamiliar with the practical application of these methods to everyday industrial and commercial life. Here, again, I would say that none of these methods is theoretical. But if by a theoretical method is meant one which is logically deduced by operating men and accountants from the actual facts of business and industrial experience, and reduced to some order and classification, I would say that all these methods are both theoretically sound and practically applicable or, in other words, that their correctness in theory is proven by their applicability to the practical facts of business life.

In almost every case, the methods discussed were first devised by practical operating men and were later adopted by accountants, generally after some persuasion by operating men and managers.

### *The General Purpose of Taking Inventory*

Every inventory method must rest on the premise that the principal purpose of taking and valuing an inventory is the determination of income for a given, limited, artificial period.

We all know that in the ordinary manufacturing or commercial business a year does not necessarily, or even usually, represent the completion of a business cycle. I suppose that the traditional use of this period is founded on the assumption that agriculture is the basis of our entire economy, and that the changing seasons exercise the same unvarying influence over all other economies as they do over the seed time and harvest of the farmer.

The most casual inspection of either production statistics or price ranges in most industries, and particularly those dealing with basic raw materials, proves that this is not so. The cycle in most industries is five, seven or nine years from periods of low prices and curtailed production through periods of expansion, high prices, increased production, back to periods of low prices and decreased production.

It is true that there are both increases and decreases during this extended period, but as has been pointed out by Pareto and other scientific economists, the general movement is from a valley to a peak and down again from peak to valley, although the line of such a movement is seldom or never straight but moves in a series of waves. In the ascending cycle the crest of each wave is a little higher than the crest of the preceding one, and in the descending cycle the crest of each wave is lower than that of the one before.

If a short period of the rising cycle be taken into consideration, the observer might think himself to be in a downward movement simply because he was descending from the crest of a wave to the trough, forgetting, or not knowing, that the trough to which he was descending was higher than the trough of the preceding wave, and in the same manner might think himself in the declining cycle to be in a rising one, merely because he was ascending to the crest of a wave lower than the crest of the wave which had gone before.

If we keep in mind that there is a broad, general movement to the series of undulations which represent the day-to-day, month-to-month, or year-to-year transactions of an enterprise, we will see why the arbitrary requirement that the results of business be determined for definite periods presents the most difficult and at the same time the most pressing problem for accountancy to solve.

Regardless of scientific economics, it is true, as a practical matter, that an enterprise must make a statement at regular recurring intervals of its income and financial position, as taxes, interest and other regular, recurring obligations must be met and dividends must be paid.

At the same time it should always be borne in mind that the results

shown for these definite, comparable periods are an aggregate of actual results of closed transactions begun and completed within the period, transactions completed in the period begun previously, and transactions which began in the period and which are not yet completed. It is for these reasons that there is always in the annual accounts of any enterprise of any size or complexity, such a large element of estimate or approximation.

### *Income Determination and the Fiscal Period*

Conservatism and safety call for the valuation of assets at as low figures as are warranted by their costs or, where applicable, by their realizable or market values. This is merely another way of stating that estimates of results of uncompleted transactions should be made on the basis of the smallest profit possible. Of course, the amount by which such estimates of profit are less than that actually realized, will be reflected in the succeeding year's income account, and if it should happen that the amount of uncompleted transactions were greater at the end than at the beginning of the year, the profit would be overstated for that year. In other words, no matter what we do to the balance sheet, we cannot consistently understate income over any considerable period of time.

Among all the approximations which must be made at the close of an accounting period, the one which is the most difficult to arrive at and which has the greatest influence on the accounting results is the determination of the money value of inventories. While the determination of quantities, condition, salability and ownership of the inventory are of the greatest importance and present many difficult problems, the problems are not concerned to any great extent with questions of abstract principle. As an abstract principle we know that physical quantities should be accurately determined by count, weight, chemical analysis or some other appropriate method. Salability and condition should be determined by qualified experts, and ownership should be verified by the proper legal means. Who should do these things, who should verify them, the extent of the verification, the responsibility for these features of the inventory are all important questions, but they are questions of practicability or expediency.

In principle, we know it would be desirable for the fullest verification of these features of the inventory to be made, and we also know that as a practical matter compromises must be made which will

assure reasonable safety without undue expenditure of time and labor.

### *The Problem of Valuation*

In the rest of the discussion I shall assume that the quantities of the inventories that are discussed are correct, that the goods are all salable and in good condition, and that there is no question as to their ownership.

This leaves us but one thing to consider, that is, how they shall be valued. It might at first sight be thought that the answer to this question would be the same as the answer to the question, "What is the inventory worth?" But in the case of a going concern, the answers to the two questions are frequently different.

Inventories fall naturally into two main divisions: one in which the purchase, production or manufacture of each unit or group of units and its subsequent sale is a completed transaction on which a profit or loss may be calculated, and which will not recur in exactly the same form or with exactly or substantially similar goods as the subject matter; and the other, one in which the process is long and continuous and the product a homogeneous and substantially uniform basic commodity partially or completely processed.

The proper method of valuation for inventories falling within the first group is cost—historical cost, standard cost, or cost determined by the retail method—reduced to market when cost exceeds that valuation.

For the second group, where a fixed minimum inventory must be maintained at all times, the normal stock method, whereby the permanent investment in inventory is carried at all times at a fixed price, or some modification or extension of this method is required to apply costs to sales correctly and to arrive at actual realizable profits

### *The Retail Method*

In a merchandising business the usual inventory method gives a result which can be used as an answer either to the question, "What is the inventory worth?" or, "How shall it be valued?" This is because under the retail method of inventory valuation the selling price is used as the basis. Inventories are valued at the price at which it is intended or hoped to sell the merchandise, and from that price is deducted the percentage of gross profit to be realized, generally known as the "markup."

It is obvious that goods recently purchased will be valued at

approximate cost, but goods which have been in stock for some time or which have been carried over from one season to another may be valued at very much less than cost as the selling price on, say, ladies' coats or dresses carried over from one season to another may be so reduced that the gross selling price, without any consideration of markup, would be less than the original cost.

This method is generally accepted as correct for merchandising enterprises as it has the effect of throwing into the current period losses which are incurred in keeping a wide assortment of goods, or in keeping a stock of goods which are subject to changes in style.

The decreased price of goods not sold in the season for which they were purchased is a direct cost of the goods sold, and the retail method of inventory throws that cost into the period to which it applies. This method is well described in detail by Malcolm P. McNair in *The Retail Method of Inventory*, and is included among the approved methods of inventory valuation by the United States Treasury Department.

I think the reason why this method is correct in merchandising is, for example, that a department store does not carry a constant inventory of 2,000 ladies' hats, but carries and deals in hats of the current style and a new stock is purchased at the beginning of each season which must be sold during the season.

The inventory cycle is complete, and the buyer is not primarily concerned with replacing hats similar to those which have been sold, but rather is anxious to buy hats of a style and design as different from his previous stock as possible.

For instance, a store might have carried an inventory of 2,000 Eugenie hats. Later on the same store will have in stock 2,000 turbans, and these will be replaced by hats of the present grotesque and peculiar shapes, of which I do not even know the name.

In other words, the store bought, sold and was through with the Eugenie hats—so were the ladies. The turbans were purchased and sold. There is no question here of maintaining a fixed stock of 2,000 hats as one hat is nothing like another, is not replaceable by another, and for all practical purposes loses its value at the close of the season. The same thing is true with almost all goods sold by department stores or similar organizations.

### *Historical Cost*

Another method of valuation, the application of which is much narrower than is generally supposed, is actual historical cost. This

method is also approved by the United States Treasury Department, and implies that no expense incurred in the production of a particular unit or product should be charged to income until the unit or product to which it applies has been sold. Two principal problems are presented by this method: first, "What should be charged to inventory cost?" and second, "Will the final cost exceed the selling price?"

The answer to the first question is given in a number of standard texts on cost accounting, and I think it is generally recognized that for all practical purposes nothing should be included in cost for purely administrative expenses, selling expense or financial charges.

The answer to the second question is best determined by calculating proper reserves to complete the work, and by comparing the actual cost plus the reserve with the expected selling price. In general, I would say that this method applies to such enterprises as those engaged, say, in the manufacture of machinery or similar products on special order, where units are generally large and where there are not a great number of orders going through the factory at one time. If there are large numbers of units going through the factory at one time, it will probably be better to value these at standard costs, particularly if production is below maximum or normal.

### *Standard Costs*

Disproportionately heavy expenses during a period of curtailed production, whether called unabsorbed overhead or by any other name, cannot be passed on to the customer and should not be carried forward in inventory. The use of properly calculated standard costs for valuation of process and finished inventories will prevent this.

The Treasury Department has made no specific ruling, so far as I am aware, on the use of standard costs as a method of inventory valuation, but it would appear to conform to the Department's general requirements for inventories at cost, and I believe accurately calculated standard costs are generally acceptable.

This method probably gives the best results in those industries where labor and manufacturing overhead form the greater part of the cost of the product, and where the amount of raw material is not of great significance compared to the total selling price or cost.

### *Taxable Income as Affected by Inventories at Current Cost or Current Market*

There seems to be no conflict in principle between the practice of the Treasury Department and generally recognized accounting prin-

ciples where inventories which can properly be stated at current costs or at current market, when costs exceed market prices, are concerned.

The methods just described, and other variations of them, are permitted under the regulations of the Bureau of Internal Revenue, and any controversies will turn on questions of fact as to the applicability of prices or the accuracy of costs or similar questions.

### *Normal Stocks*

None of these methods, however, shows accurate results in industries producing basic raw materials, or where the greater part of the cost of a finished product is the cost of the basic raw material of which it is composed. This is particularly true where the processing period is long, and where a constant minimum amount of the raw material must be maintained in process.

In enterprises of this sort, for example, a woolen or cotton mill, a tannery, a smelter or an oil refinery, there must be kept in process an amount of raw material which is substantially equal to the production of the plant for the length of the processing period. A tannery, for instance, buys green hides, puts them in process, and at the end of sixty, ninety or one hundred and twenty days produces finished leather. By the time the first purchase of hides has passed through the process and come out as finished leather, another equivalent quantity will have been purchased and put in process, and this will be repeated as long as the tannery is in operation.

### *Normal Stock Method Applied to a Tannery*

Table 1 shows in a somewhat simplified form a typical series of transactions on a fluctuating market comparing results under the first-in, first-out method and the normal stock method.

When the first lot of finished leather is produced, let us say the price for hides is twelve cents per pound, but that at the beginning of operations the price was ten cents per pound. The tannery will sell the finished leather at a price based on a twelve-cent hide market, and will be forced at the same time to buy an equivalent amount of hides at the same market price of twelve cents.

Under the first-in, first-out method, an apparent profit of two cents per pound would have been realized, but the manager of the tannery, being a practical business man, would not have calculated his profit in that way. He would have said, "I am selling finished leather on the basis of a twelve-cent hide market, and I must replace this with green hides at the same price. Therefore, my only profit, if any, is

TABLE 1

FIRST LOT	FIRST-IN FIRST-OUT			NORMAL STOCK		
	Units	Price	Amount	Units	Price	Amount
Sales .....	500,000	12 ¢	\$60,000	500,000	12¢	\$60,000
Cost of Sales.....	500,000	11 6¢	58,000	500,000	12¢	60,000
Profit . . . . .			<u>\$ 2,000</u>			<u>\$.. ..</u>
Cost of Sales						
Inventory—beginning	100,000	10 ¢	\$10,000	100,000	10¢	\$10,000
Purchases . . . .	500,000	12 ¢	60,000	500,000	12¢	60,000
			<u>70,000</u>			<u>70,000</u>
Inventory—end ....	100,000	12 ¢	12,000	100,000	10¢	10,000
As above .. .			<u>\$58,000</u>			<u>\$60,000</u>
SECOND LOT						
Sales .....	500,000	15 ¢	\$75,000	500,000	15¢	\$75,000
Cost of Sales....	500,000	14.4¢	72,000	500,000	15¢	75,000
Profit .....			<u>\$ 3,000</u>			<u>\$...</u>
Cost of Sales:						
Inventory—beginning	100,000	12 ¢	\$12,000	100,000	10¢	\$10,000
Purchases . . . . .	500,000	15 ¢	75,000	500,000	15¢	75,000
			<u>87,000</u>			<u>85,000</u>
Inventory—end ....	100,000	15 ¢	15,000	100,000	10¢	10,000
As above .....			<u>\$72,000</u>			<u>\$75,000</u>
THIRD LOT						
Sales .....	500,000	11 ¢	\$55,000	500,000	11¢	\$55,000
Cost of Sales .....	500,000	11 8¢	59,000	500,000	11¢	55,000
Loss .....			<u>\$ 4,000*</u>			<u>\$.....</u>
Cost of Sales:						
Inventory—beginning	100,000	15 ¢	\$15,000	100,000	10¢	\$10,000
Purchases .....	500,000	11 ¢	55,000	500,000	11¢	55,000
			<u>70,000</u>			<u>65,000</u>
Inventory—end ....	100,000	11 ¢	11,000	100,000	10¢	10,000
As above ... .			<u>\$59,000</u>			<u>\$55,000</u>

\* Indicates a negative figure.

on the tanning of these hides, and the two cents per pound profit is fictitious and unrealizable, as I must immediately spend that money for hides to replace those sold." Following this reasoning, the manager would value his hides in process at ten cents.

If by the time the purchase of twelve-cent hides was finished the hide market was, say, fifteen cents, the manager still would make nothing on his hides as he would have to replace them at the same market price, and his inventory in process would continue to be valued at the original figure of ten cents per pound.

Under the first-in, first-out method, he would have made an additional three cents per pound. In other words, he would have made a profit equal to fifty per cent of his inventory on that basis. But on the basis of normal stock or, as it might be called, the replacement method or the application of current costs to current sales, he would have made no raw material profit and would still have on hand an inventory equivalent to his beginning inventory priced at ten cents per pound.

If on his next purchase the price had declined to eleven cents, he would have shown under the first-in, first-out method, an apparent loss of four cents per pound, but this loss would not in fact have taken place and he would have on hand a quantity of hides equivalent to his beginning inventory which he would still carry at ten cents. In other words, whenever the manager replaced hides which he had sold, the replacement and the sale were both made on the basis of the current market.

### *Application to Smelting*

To take an example where the process is radically different but where the principle is the same, let us assume that a smelter starts operations in a mining district where there is a good, steady supply of ore. Let us say that at the beginning of operations the price of zinc was three and one-half cents per pound, and that the smelter's refining period was ninety days.

The smelter during the first ninety days will buy sufficient ore to provide for its operations. Let us assume that at the end of ninety days the price had advanced to four cents per pound. The smelter would be in the position of buying ore under the usual form of contract at the price current at the time of the purchase with the agreed deductions for refining, freight and penalties.

The ore which it bought at the end of the ninety-day period would

be based on a four-cent zinc price, and the sales which the custom smelter makes against its intake would be made at that price.

It does not seem reasonable, from the point of view of the management of the smelter, to say that on the sale of zinc purchased and sold for four cents there should be applied part of the original purchase of metal necessary to supply the process inventory at three and one-half cents per pound, thus showing a fictitious profit of one-half cent per pound. It would seem more nearly correct to apply the sale made on the day of the purchase to that purchase at the same price.

A custom smelter must, if it wishes to avoid speculating in the metal market, sell as it buys, and it would seem correct accounting to reflect the intentions and the acts of the management in the accounts, rather than to prepare accounts which show half of the transaction, the sale, on a current basis and the other half, the purchase, on the basis of what had happened three months before.

A manufacturer who uses a basic raw material such as copper, where the cost of the metal contained in the product is a relatively large proportion of the price, generally bases his price on a manufacturing differential plus the value of the metal, which price is varied as the price of the metal changes. I think all of you that have any connection with the brass or wire industry know that whenever the price of copper and zinc changes, we always get a change in those prices.

If such a manufacturer takes orders today which involve some 50,000 pounds of copper to be delivered, say, three months from now, he will place a purchase order for a like amount of metal in the shapes which he requires, thereby covering his sale and insuring himself against any loss due to a change in the price of the metal. This transaction may be divided into two parts, the current purchase and the current sale of the metal, and its fabrication in the form required by his customer.

As the manufacturer is not generally desirous of speculating in metal, he adopts this policy to insure that he receives a reasonable profit on fabrication, and he does not suffer any loss from fluctuations in the price of the raw material.

If such a procedure is followed and the manufacturer is forced by the use of the first-in, first-out method to apply against his sale metal which was purchased sometime before the sale was made, he will show a totally fictitious profit or loss on metal, and this profit or loss will be the result of writing up or writing down his normal fixed

minimum stock which he must carry at all times in process in order to operate his mill

### *Attitude of Management*

In many cases where accounts are kept for tax or other purposes on a first-in, first-out basis, the management insists on supplementary records kept on the basis of applying current costs to current sales. The management know that they cannot successfully operate a business on the basis of sales now and purchases three months ago, and the management will frequently disregard the financial books if prepared on the first-in, first-out basis, and use for their calculations, on which they base their judgment as operating men, records which are kept on the normal stock basis or the application of current costs to current sales.

Frequently these operating records are kept in much less detail and in less exact form than the financial books on the first-in, first-out basis, and the practical operating men who require this information do not always, I imagine, realize that they are using a scientific and accurate method of inventory valuation and of determining profit on sales. They may think that in some incomprehensible way the financial books are right for some inscrutable purpose which they cannot understand; but they do know that when they buy, manufacture, or sell they must rely on the information which tells them how much they need to sell their current purchases for in order to make a profit and to replace that material through current transactions.

I believe, and I think many of you will agree with me—particularly those of you who are not practicing accountants but who are the accounting advisers of executives and operating men—that the practical operating man knows what he wants his accounts to show him, and that he knows generally when the results are substantially correct and when they show profits or losses or other conditions which do not exist in fact.

True, the operating man cannot advise the accountant on how to arrive at a correct result, but he does know, frequently by a sort of instinct developed by long experience, when the accounting results are substantially right. It is a great error for an accountant who may be highly qualified technically to disregard the questions and statements of operating men, even though these may be expressed crudely and may show a lack of knowledge of the fundamentals of technical accounting.

The operating man is in somewhat the position of the Roman

critic who objected to the quality of the flute playing at some entertainment. The flute player turned on him and said, "You cannot pipe a note on this flute, how dare you tell me how to do it, and what is right or wrong?" The critic smiled and said, "It is quite true I cannot play a flute. I am also unable to cook a dinner, but I believe I can tell as well as the best cook in Rome, whether a dinner is good or not."

The operating man is in the same position. He does not know how to get the results, and frequently does not care. He cannot tell specifically whether they are wrong, but if prices have been rising for a considerable period, and each time he purchases material he must pay more for it, and his selling prices have not quite kept pace with the rising raw material prices, he will tell the accountant who shows him an apparent profit based on the assumed sale of his beginning inventory which was carried at a low price, that no profits are being made, that he is struggling to break even on current operations, and that whatever the books show, no one can make money by selling at a price equal to or less than that at which he must currently purchase materials. This fallacy is shown by Table 2, page 178, which will be discussed more fully later on.

#### *Normal Stocks Under Regulations of the Bureau of Internal Revenue*

The United States Treasury Department does not now recognize the use of normal stocks for tax purposes. In Regulations 86 and previous Regulations, it was specifically mentioned as one of several methods of inventory valuation which were expressly prohibited.

Cases have been taken to the Supreme Court on this issue, most of which have been unfortunate in their subject matter as it was possible in each case to argue that the normal stock, which it was contended had to be carried at all times, was merely a stock of material—in some of the cases structural steel and in other cases tin plate—which was carried at all times as a reserve supply. This is a correct but somewhat unusual application of the normal stock method.

No case has been tried where the production of a basic raw material requiring long and complicated processing was involved. The subject matter of the cases tried is probably responsible for the impression one gets in reading them over, that the arguments were not as well presented as possible, and consequently the judges who decided the cases did not completely realize the implications of the points at issue.

It is inconceivable that the Supreme Court of the United States

would wish a taxpayer to show as earnings the difference in price between the same asset held both at the beginning and the end of a period. If applied to land, buildings or machinery, the imputation of such a profit to a period of rising prices would be ridiculous on its face. The principle is no different in revaluing a normal stock of a basic raw material at the beginning and end of a period, and the apparent profit or loss so computed is equally fictitious and unrealizable.

This principle has been recognized for a long time by the British Revenue Authorities. I have not been able to find out when the method was first permitted, but it is spoken of in a report of a committee of eminent chartered accountants, dated in the year 1917, on certain points involved in the Munitions Levy and Excess Profits Duty:

In certain base metal manufacturing trades such as copper, pig iron, lead, spelter, etc., it has been the custom for a long period in the past to adopt what is known as a "base value" for part of these materials, on the theory that it is necessary for the undertakings using them to keep a reserve stock to protect themselves against results of strikes and adverse fluctuations in market value, etc., and for this purpose they have adopted a value which represents what may be called a minimum cost for a series of years for a minimum quantity; in theory, keeping this minimum quantity untouched, and unused, although in practice no actual reserve stock may be kept which could be identified at any time; any excess over this amount is valued at cost or market value, whichever is the lower.

It appears to have been the practice of the Inland Revenue to admit for income tax purposes, stock valuations of this character in the case of base metals, provided that it is the general custom of the particular trade, and has also been the practice in the individual case, and it will be difficult now to disturb this practice.

### *Effect on Taxable Income of Two Bases of Valuation*

Table 2 shows clearly the disastrous results which may be expected from the apparent prosperity shown by a period of continuously rising prices. That is one of the most peculiar things about this situation. Companies which should use normal stocks under the present tax law have more to fear from what looks like prosperity caused by rising prices than they have to fear by losses. They may continue to be in existence if they have losses due to declining or steady prices, but they will surely be ruined by continuously rising prices.

As a result of five different transactions there is shown on the first-in, first-out method a profit of \$16,000 on sales of \$37,000. Of this profit of \$16,000, \$15,000 is represented by increased inventory

TABLE 2

FIRST-IN FIRST-OUT										NORMAL STOCK				
Transaction	Inventory				Cost of Sales	Sales	Profit	Inventory				Cost of Sales	Sales	Profit
	Units	Price	Amount					Units	Price	Amount				
Inventory—beginning . . . . .	400,000	3 ¢	\$12,000					400,000	3¢	\$12,000				
Purchase A—100,000 @ 4 ¢	100,000	4 ¢	4,000					100,000	4¢	4,000				
Sale Z—100,000 @ 5 ¢	100,000*	3 ¢*	3,000*	3,000	5,000	2,000		100,000*	4¢*	4,000*	4,000	5,000	1,000	
Inventory	400,000	3¾¢	13,000					400,000	3¢	12,000				
Purchase B—200,000 @ 5 ¢	200,000	5 ¢	10,000					200,000	5¢	10,000				
Sale Y—100,000 @ 6 ¢	100,000*	3 ¢*	3,000*	3,000	6,000	3,000		100,000*	5¢*	5,000*	5,000	6,000	1,000	
Sale X—100,000 @ 5 ¢	100,000*	3 ¢*	3,000*	3,000	5,000	2,000		100,000*	5¢*	5,000*	5,000	5,000		
Inventory	400,000	4¾¢	17,000					400,000	3¢	12,000				
Purchase C—100,000 @ 7 ¢	100,000	7 ¢	7,000					100,000	7¢	7,000				
Sale W—100,000 @ 6½¢	100,000*	3 ¢*	3,000*	3,000	6,500	3,500		100,000*	7¢*	7,000*	7,000	6,500	500*	
Inventory	400,000	5¼¢	21,000					400,000	3¢	12,000				
Purchase D—100,000 @ 7 ¢	100,000	7 ¢	7,000					100,000	7¢	7,000				
Sale V—100,000 @ 7 ¢	100,000*	4 ¢*	4,000*	4,000	7,000	3,000		100,000*	7¢*	7,000*	7,000	7,000		
Inventory	400,000	6 ¢	24,000					400,000	3¢	12,000				
Purchase E—100,000 @ 8 ¢	100,000	8 ¢	8,000					100,000	8¢	8,000				
Sale U—100,000 @ 7½¢	100,000*	5 ¢*	5,000*	5,000	7,500	2,500		100,000*	8¢*	8,000*	8,000	7,500	500*	
Inventory—end . . . . .	400,000	6¾¢	\$27,000					400,000	3¢	\$12,000				
Total Profit . . . . .				\$21,000	37,000						\$36,000	37,000		
Composition of Inventory at end . . . . .	100,000	5 ¢	\$ 5,000											\$1,000
	200,000	7 ¢	14,000											
	100,000	8 ¢	8,000											
	400,000	6¾¢	\$27,000					400,000	3¢	\$12,000				

\* Indicates negative figures.

valuations, although the number of units is exactly the same as at the beginning.

If current purchases are applied to current sales under the normal stock or similar methods, a profit of only \$1,000 is shown, and the inventory at the end which consists of the same number and kind of units as at the beginning is valued at the beginning price.

The company, the transactions of which are shown in the table, would have had to borrow \$15,000 to pay out as dividends all of the apparent profits arrived at on the first-in, first-out method as shown in the table, or would have been compelled to deplete its cash to that extent as the only cash profit realized was \$1,000.

Under the 1936 Act if all taxable income on a first-in, first-out basis were distributed as dividends, the tax alone would amount to \$1,720 or 172 per cent of the entire realized or realizable profit, and if no dividends were paid the tax imposed on the fictitious undistributed earnings would be 221 per cent of the entire cash profit. In other words, in the example shown, in which the fluctuations are large but far from impossible, a nominal tax rate of 25 per cent, assuming no dividends were paid, would amount to an actual tax rate on realized or realizable income of 393 per cent; while if all taxable income on a first-in, first-out basis were distributed, a nominal rate of 11 per cent would amount to a rate of 172 per cent on realized or realizable income.

I admit when these figures were worked out that I thought they were ridiculous, but they are quite possible. In companies which should use a basic stock, which have to carry large normal stocks, if there is a period of continuous rising prices I think we are going to find case after case where the nominal tax rates, which are high enough, will be multiplied ten and twelve times.

I do not know what is going to happen, or what the answer is, but those are the facts as the law is drawn, provided the Department sticks to its policy of insisting on first-in, first-out.

These points were brought out by two witnesses before the Senate Finance Committee during the hearings on the Revenue Act of 1936. The Committee gave these witnesses a courteous and sympathetic hearing, and referred them to the expert advisers of the Committee.

In the Minority Report of Senators Walsh and George, as printed in *The New York Times* of June 20, 1936, the inequalities involved in the application of the taxes levied under the 1936 Revenue Act to industries which should use normal stocks or some similar method of inventory valuation were clearly stated. The testimony presented

before the Committee seems to have been sufficient to make clear to the dissenting Senators the difference between actual realized profits and profits which exist only as a markup of an inventory, as the following quotations from the report indicate.

. . . It is designed to encourage, if not indeed to compel, corporations, large and small, to distribute all their earnings, even though they are merely inventory gains, and to lay aside nothing for a rainy day.

. . . In addition, the following business concerns are undoubtedly discriminated against:

- (1) Those which at the present time have no reserves
- (2) Those whose entire taxable net income may be merely increases in their inventories.

In this testimony it was brought out that the use of fixed normal minimum stock carried at a constant price or other inventory methods closely approximating this, was not a device to reduce taxes. It was shown that it was primarily a method devised to show correct operating results by applying to current sales the cost of current purchases. It was also shown that no losses of revenue or decrease in net taxable income would be involved over a period of years equal to the natural cycle of the industry.

#### *Effect on Governmental Revenue of Permitting the Normal Stock Method*

Losses of revenue to the Treasury could occur only if the fictitious profits shown by the first-in, first-out method were so large that a fictitious loss would be shown in the following period.

Obviously, as shown by Table 3, more taxes would be paid over a period of three years if the first-in, first-out method showed \$125,000 profit for the first year, \$75,000 loss for the second year, and \$25,000 profit for the third year, instead of—as would probably be shown by the normal stock method—a steady profit of \$25,000 per year.

However, I do not believe the Treasury Department or the Bureau of Internal Revenue would care to advocate a method of accounting which would have the effect of magnifying both profits and losses to the disadvantage of the taxpayer where losses could not be offset against profits.

If, however, the results of the first-in, first-out method show some profit in each year, the result in terms of taxable income would be precisely the same, but would be distributed over periods in accordance with the actual realized difference between cost and selling price on current purchases and sales. The Revenue authorities should, and I believe will, welcome a method which will insure a steadier and more uniform flow of the stream of taxes into the Treasury.

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FIRST-IN FIRST-OUT					NORMAL STOCK				
	Units	Price	Amount	Taxable Profit	Non-deductible Loss	Units	Price	Amount	Taxable Profit
FIRST YEAR									
Sales .....	2,500,000	21 ¢	\$525,000			2,500,000	21 ¢	\$525,000	
Cost of Sales .....	2,500,000	16 ¢	400,000			2,500,000	20 ¢	500,000	
Profit .....			\$125,000	\$125,000				\$ 25,000	\$25,000
Cost of Sales									
Inventory—beginning .....	1,000,000	10 ¢	\$100,000			1,000,000	10 ¢	\$100,000	
Purchases .. .....	2,500,000	20 ¢	500,000			2,500,000	20 ¢	500,000	
Inventory—end .....	1,000,000	20 ¢	600,000			1,000,000	10 ¢	600,000	
As above .....			200,000					100,000	
			\$400,000					\$500,000	
SECOND YEAR									
Sales .....	4,500,000	10 5/9 ¢	\$475,000			4,500,000	10 5/9 ¢	\$475,000	
Cost of Sales .....	4,500,000	12 2/9 ¢	550,000			4,500,000	10 ¢	450,000	
Profit or Loss .. .....			\$ 75,000*		\$75,000*			\$ 25,000	\$25,000
Cost of Sales									
Inventory—beginning .. .	1,000,000	20 ¢	\$200,000			1,000,000	10 ¢	\$100,000	
Purchases .....	4,500,000	10 ¢	450,000			4,500,000	10 ¢	450,000	
Inventory—end .....	1,000,000	10 ¢	650,000			1,000,000	10 ¢	550,000	
As above .. .			100,000					100,000	
			\$550,000					\$450,000	
THIRD YEAR									
Sales ..	4,500,000	10 5/9 ¢	\$475,000			4,500,000	10 5/9 ¢	\$475,000	
Cost of Sales .....	4,500,000	10 ¢	450,000			4,500,000	10 ¢	450,000	
Profit . . . . .			\$ 25,000	\$ 25,000				\$ 25,000	\$25,000
Cost of Sales									
Inventory—beginning .. .	1,000,000	10 ¢	\$100,000			1,000,000	10 ¢	\$100,000	
Purchases .. .....	4,500,000	10 ¢	450,000			4,500,000	10 ¢	450,000	
Inventory—end . . . . .	1,000,000	10 ¢	550,000			1,000,000	10 ¢	550,000	
As above .....			100,000					100,000	
			\$450,000					\$450,000	
PROFIT OR LOSS .....			\$150,000	\$150,000	75,000*			\$450,000	\$75,000

\* Indicates a negative figure

*Change in Tax Law Not Required*

The general opinion seems to be, both among Treasury Department officials and attorneys and accountants who have studied the question, that while the question of the use of the normal stock inventory method is of the utmost importance to the industries to which it applies, it is not of such a nature as to require a change in law. Under Section 22 (c) of the Revenue Act of 1935, which is unchanged in the 1936 Act, which reads as follows:

... inventories shall be taken by such taxpayer upon such basis as the Commissioner, with the approval of the Secretary, may prescribe as conforming as nearly as may be to the best accounting practice in the trade or business and as most clearly reflecting the income,

the Commissioner already has the power to permit the use of this method, and he is not estopped from using this method by the decisions in the case of the Kansas City Structural Steel Company, and others.

These decisions stated, in effect, that the method was not well recognized either by industry or by the accounting profession, that the method was obsolete, and that it did not show true income, although in one case, that of the American Can Company, the court did agree that the income shown by the normal stock method so closely approximated income on a cash basis that the cash basis might be used.

*Normal Stock Method Recognized in Ruling on Silver*

The principle of permitting the use of a normal stock and of applying current purchases to current sales is not entirely strange to the Treasury Department and to the Bureau of Internal Revenue. After the proclamation of the President, December 21, 1933, under which newly-mined domestic silver was given a value of 64½ cents per ounce, the Treasury Department, in its regulations, recognized the factor of fixed inventory by permitting the immediate substitution for the newly-mined silver of any silver which came out of the refinery, so that any silver thus available in a refined form, when accompanied by miners' affidavits showing the origin of domestic silver mined after that date, became available immediately for delivery to the government at the government price, even if physically it would have been impossible for it to have come through the various processes of milling, smelting and refining.

Obviously, if the first-in, first-out method had been enforced, the smelter purchasing the newly-mined silver would have been forced

to sell at the price for silver not covered by miners' affidavits an amount equal to its inventory before it could realize the affidavit price, and at whatever time the silver purchase program shall cease, the smelter would be left with an inventory of silver purchased at affidavit prices which would have to be sold for the world price at that time, which would presumably be below the affidavit price. The Treasury Department recognized the injustice of such a condition and remedied it by applying the normal stock method.

In other words, the smelter had to keep the process stock there indefinitely. The first newly-mined silver, if they used this method, would have pushed out some of the old inventory which they would have had to sell at the world price, which is exactly what is done in the first-in, first-out method, but the Department recognized the injustice of this and allowed, for silver purchases, the normal stock method.

In permitting the holder of a number of shares of the same security purchased at different times to designate which shares are intended to be sold in a particular transaction rather than the strict application of the first-in, first-out method, the Department recognizes the possibility of the application of current purchases to current sales.

Although the normal stock method is expressly prohibited under Article 22 (c) of Regulations 86, and under similar articles of previous regulations, this would seem to be in direct contradiction of the statement with which Article 22 (c) opens:

Section 22 (c) provides two tests to which each inventory must conform:

(1) It must conform as nearly as may be to the best accounting practice in the trade or business, and

(2) It must clearly reflect the income.

It follows, therefore, that inventory rules cannot be uniform but must give force to trade customs which come within the scope of the best accounting practice in the particular trade or business. In order clearly to reflect income, the inventory practice of a taxpayer should be consistent from year to year, and greater weight is to be given to consistency than to any particular method of inventorying or basis of valuation, so long as the method or basis used is substantially in accord with these regulations. An inventory that can be used under the best accounting practice in a balance sheet showing the financial position of the taxpayer can, as a general rule, be regarded as clearly reflecting his income.

### *Extension of Application of Normal Stock Principle Suggested*

It would seem clear from all of the foregoing that the Treasury Department and the Bureau of Internal Revenue are not irretrievably committed on the question of normal stocks and the applicability

of current purchases to current sales, but that the Department has made an endeavor to restrict the application of this principle to conditions and industries to which it applies.

With this attitude I think everyone will agree. It is not suggested that the Department should take any new position or that it should reverse itself, but rather that it should extend the application of normal stocks, already recognized in principle in the silver regulations, to certain other specific conditions and industries to which this principle applies.

It should be clear to anyone making even a cursory examination of the subject that this method of arriving at profits and valuing inventories is not any more nearly universal in its application than the other methods which have been discussed, and is by no means applicable to all industries alike.

The conditions which require the use of the normal stock or some similar method to state correctly corporate income have already been outlined, and it would seem proper for the Treasury Department—in whatever change in the regulations it may make—to keep clearly in mind that the method is restricted to certain types of industries, and that no opportunity should be given to evade or reduce taxes properly due on income actually realized.

The Department should, however, so frame its regulations that in the industries to which the normal stock method applies, only income which is actually realized or realizable will be taxed, and the showing of apparent and largely fictitious profits or losses in certain industries during periods of fluctuating prices should be avoided.

The imposition of higher tax rates, particularly on corporations, which would appear for the next few years at least unavoidable, magnifies to an almost grotesque extent the inequalities caused by the forced use of the inapplicable first-in, first-out method to industries which should use a normal stock, and makes the situation sufficiently serious to warrant the closest attention of both industry and government.

#### *General Acceptance of Normal Stock Method Where Applicable*

While it is recognized that this method cannot be applied indiscriminately to all types of enterprises, it does apply in more industries than those discussed in this paper. Generally, it cannot be applied to any industry which does not in some way process the material. The material must be basic and homogeneous, and must be such that no question of style or design is involved.

It is interesting to note that in industries of this type it has been the experience during the depression that the normal stocks were not reduced greatly below the figure calculated as being required at maximum production, and that as production increased the small amount by which the normal stock was depleted had to be restored when operations approached capacity.

It is true that at times of heavy production the total inventories will be larger, and that these will be reduced as deliveries are made to a greater extent than orders are taken. This, however, has no bearing on the question of normal stocks and merely illustrates the fact that the purchase commitments must be made to fill sales commitments.

At a particular point when deliveries have been made against purchase commitments and the sales have not been delivered, there will, of course, be a substantial apparent increase in inventory, but in the well-managed business this will be practically all represented by the sales commitments already made. If this is not true, the management is speculating in raw material, and the speculation may or may not be successful.

#### *Influence of Fictitious Inventory Profits in Recent Years*

It is a mistake to think that the normal stock method of applying current costs to current sales, and of valuing inventories, applies only to a few isolated trades or enterprises; that it is unimportant in our general business and economic life; or that it is a species of special pleading for the benefit of particular industries. The industries which should use this method in determining income represent an investment of billions of dollars, employ hundreds of thousands of men, and provide us with the shoes we wear, the gasoline which drives our cars, and the metals without which our present standard of living would be impossible.

Overstated profits represented by fictitious inventory valuations, arrived at under conventional accounting methods, had a large, if not a determining, influence in emphasizing and exaggerating both the rise and fall of corporate earnings, security prices and the revenues of the government derived from the federal income tax. When corporate earnings were exaggerated by the inclusion of fictitious inventory profits, unjustified dividends were paid, and already adequate facilities were expanded recklessly.

Unexpected increases in the federal revenue tempted Congress to discover ways of spending it. I do not need to enlarge on the de-

plorable effects of stating, as though they were realizable, profits which existed only through an arbitrary revaluation of inventories which did not change in quantity or composition, but which were successively marked up as prices advanced.

When security and commodity prices began their precipitous descent, actual losses were multiplied, in some cases many fold, by the inclusion of fictitious losses caused by the marking down of inventories of basic raw materials to abnormally low prices.

These exaggerated apparent losses forced management into economies in some cases as ill-advised as their former extravagance, and into undue and unnecessary retrenchment. Stockholders, employees, customers and grantors of credit suffered immediately, and the revenue of the government from these enterprises practically ceased.

Let me repeat: We are not asking the United States Treasury Department to favor any particular class of taxpayers. We are not asking for any method which will reduce or minimize taxes. What we do ask for is the permission to use as a basis for computing taxable income, a method already approved by important business and professional bodies, and in use by representative units in basic industries which will arrive at a taxable income as nearly correct as possible, which is realized or realizable, and which is directly proportional to the actual business done by the enterprise year by year.

We must all pay federal taxes, and we must, I fear, continue to pay heavy ones for some years to come. None of us can escape his share of the burden, and I believe no thinking citizen wishes to. However, every citizen and every enterprise is entitled to an assessment of federal income tax on income which is actually realized or realizable, and it is only this which we ask. We ask to be protected from the imposition of a tax ostensibly on income which might be so heavy, and the incidence of which might be so capricious, as to constitute an unbearably heavy levy on capital which would threaten the very existence of many enterprises essential to the well-being of the community.

It would appear that if a showing could be made of what I believe is unquestionably the fact, that several major industries in this country—the petroleum industry, the lead smelting, refining and processing of non-ferrous metals and the primary fabrication of copper and brass—have gone on record as favoring this method, or that a majority of the industries are using this method, that we would have gone a long way towards answering the objections that the method is obsolete and going out of use.

If accounting bodies such as this would go on record as has already been done in some cases, stating that it is the consensus of the membership that in the industries to which this method applies it is a proper one for stating accounts both for management and taxation purposes, much weight would be given it by the revenue authorities.

### *Resolution Proposed*

Now, gentlemen, I am going to take advantage of the fact that I am a member of this Association; I believe as such I have the right to introduce a resolution which I hope will be seconded, and which I think will help not only the individual industries but business as a whole if it is passed. I propose this resolution:

Whereas, in certain industries producing, refining, fabricating or otherwise processing basic raw materials the use of a basic normal minimum stock carried at fixed prices is a well recognized, accepted accounting practice which, in the opinion of executives and accountants connected with those industries, most clearly reflects income; be it

RESOLVED, that the National Association of Cost Accountants respectfully requests and urges the United States Bureau of Internal Revenue to permit under regulations issued by it, in those industries where such a method is applicable, the use of the normal stock method or similar methods of valuing inventory and costing sales in the computation of taxable income for purposes of the United States Federal income tax.

CHAIRMAN WALSH: Before we ask for discussion, I think it may be advisable for us to act upon the resolution proposed by Mr. Peloubet. Does anyone second it?

T. B. DUNN (*Auditor, Kansas City Structural Steel Co., Kansas City, Kan.*): Mr. Chairman, being Auditor of the Kansas City Structural Steel Company, I would like to second that resolution.

MR. PELOUBET: I would like to express my appreciation of that. I think that is one of the best things I have heard for years.

CHAIRMAN WALSH: The resolution has been seconded. I might say that if we as members adopt the resolution, our action is subject to the approval of the Board of Directors of the Association before the resolution is presented to the United States Government. You have heard the resolution.

. . . The question was put to a vote and lost . . .

CHAIRMAN WALSH: We have a limited time only for discussion. We cannot carry the discussion too far because of the time. What questions are there now that you would like to ask about this normal stock basis of Mr. Peloubet's?

HUGH G. DAVIS (*Accountant, Honolulu Rapid Transit Co., Ltd., Honolulu, T. H.*): May I suggest the mover of that motion read it again?

. . . Chairman Walsh re-read the motion . . .

CHAIRMAN WALSH: Now what questions are there about the normal stock method?

ROBERT PIERCE (*Treasurer, Briggs Manufacturing Co., Detroit, Mich.*): Should we consider the normal stock in the balance sheet as a current asset or as a fixed asset?

MR. PELOUBET: I think the answer to that is that unfortunately we work under certain conventions in accounting which we cannot change. Now under those conventions, any inventory is a current asset. As a matter of fact, and as a matter of principle, I think there is no doubt that the normal stock is a fixed asset, but I know one case where the company has an indenture under which bonds are issued, and they are required to keep a certain amount of current assets.

Well, that company happens to be on a normal stock basis, but they are not permitted to show their normal stock as anything but a current asset. I think that is one of those cases where we have a more or less illogical accounting convention which has grown up, probably through the influence of bankers, and where the best thing to do is to state what the normal stock is. I would like to see the convention changed. I would like to see normal stocks taken as a fixed asset, but I do not think the time is right to do it now. We have years and years of education before us before that would be recognized.

However, I am glad to start the ball rolling as it is correct in principle. I do not know whether that is a good answer to the question, but it is to the situation.

J. C. METSCH (*Cost Accountant, Lehn & Fink Products Co., Bloomfield, N. J.*): Is the inventory at no time changed as far as price is concerned?

MR. PELOUBET: Well, that is a question which can be divided into two parts. Usually inventory consists of our fixed minimum normal stock and some amount in excess of that. When operations are heavy you have more excess, and when they are down you have less, and you sometimes get down to your minimum.

The price on your minimum stock would not change. Of course, if, as happened in 1932, the bottom drops out of prices for raw materials, anyone who carried a normal stock at a price of, say, 1925, will have to make the balance sheet adjustment but it would not affect your income provided that your normal stock price never got below market. If it changed from a balance sheet point of view, that would only affect your surplus. I think that is the generally accepted view on it, and it has been agreed to by the Securities and Exchange Commission in several issues in which this method has been used.

I think it is much better to avoid the use of a reserve. When a reserve is applied to inventories to get the same effect as normal stocks, it has much the same effect on the Treasury Department as waving a red rag has on a bull. I think we ought to keep away from anything suggesting that we are using reserves against the inventories, because that is going to prejudice the use of this method as much as anything else, but it does have much the same effect as if you took your inventory first-in, first-out and made a reserve against it, but we do not want to put it that way.

WILLIAM L. KEATING (*Partner, Miller, Donaldson & Co., New York, N. Y.*): Regardless of the merits of this proposal I think most of us hesitate to approve a resolution presented to us without sufficient opportunity for discussion, and I doubt very much that we have sufficient time for this discussion today.

In the petroleum industry (one of the industries mentioned by the speaker) this matter has been under discussion for years. There they have the problem of carrying normal quantities of oil in pipe lines and in tanks (some with floating covers), and perhaps as much as any industry, they should favor this method. However, I understand they have never agreed upon going ahead with a resolution of this sort.

The wool industry was mentioned as one which would come under this proposal, or it was suggested that it would. I doubt that it would. While wool is commonly considered as a basic commodity, it is not basic in the sense that quoted market prices are readily avail-

able for all the various kinds of wool in the various forms in which it can be purchased, such as unscoured and scoured wool, top, yarn or fabric, because raw material requirements of various mills will differ widely. Nor do you have really a minimum stock of wool in any woolen or worsted mill because there is a rapid processing of hundreds of different lots of various specifications as requirements dictate, for the two well-defined seasons each year.

I would hesitate to approve this resolution, mild though it may be, because there may be the hazard of misunderstanding. The Bureau might feel that we, representing all cost accountants and not cost accountants of any one particular industry, were attempting to dictate at the time of a new tax law something which might give an advantage to a particular industry. I do not believe we care to do that.

It would be my feeling that cost accountants of some particular industry where this is an open and shut accepted rule, should go on record that this is something which the government has no right to dictate upon arbitrarily; perhaps another industry could do the same; and then we, as cost accountants representing all industries, would have a body of well-defined principles which we could accept. I think that the idea, while not new, has sufficient newness to it to warrant distribution of printed copies of the resolution and careful consideration of all members. Perhaps a committee could be appointed to make recommendations before we pass the resolution. Then, the weight and force of it would be sufficient to accomplish the purpose. Anything we could agree upon hurriedly today would be so hedged with weasel words that we would miss the point entirely.

CHAIRMAN WALSH: I have observed in my experience that a good judge always listens to both sides, and then he tells the parties to submit briefs. I will be guided in my judicial decision by asking both sides to submit briefs. The suggestion made by Mr. Keating will probably be adopted by the Board of Directors of having a technical committee of the Association weigh this matter pro and con before we make and pass a resolution.

I think this plan will be acceptable to Mr. Peloubet. He has just told me that it will be.

I would like to continue this debate. It is the first time I have seen so much action in a long time. However, our time is getting short, and as we have some other information that you will be interested in, I want to pass on to the next speaker whose paper deals with the control of inventories.

We have now brought to your attention some novel if not new methods of valuation. We hope to do the same thing in connection with the control of inventories.

In looking for a speaker on the subject of control of inventories, we had a hard task. It was not by any means an easy matter to get someone to come here and tell you how inventory should be controlled. We were fortunate, however, in securing one of our own members who is an engineer. We had an engineer this morning, and we have an engineer this afternoon who has given over considerable time to a study of this subject.

The speaker, upon being graduated from the Massachusetts Institute of Technology, entered the business world in the field of production, and was actively engaged in the supervision of production and the improvement of production methods. Subsequently, he became associated with McKinsey, Wellington & Co., and in professional practice has had a wide experience in this line of work. I think you will be quite interested in the subject of inventory control, because it is becoming increasingly difficult. I am happy to introduce Mr. Irvin Gerofski, one of our own members.

## PRESENT-DAY PROBLEMS IN INVENTORY CONTROL

IRVIN GEROFSKI

Industrial Engineer, McKinsey, Wellington & Co.,  
Boston, Mass.

**I** BELIEVE that we may secure a better understanding of this problem of inventory control if we view it in relation to other elements which are part of the business structure. I wish that I could do this by giving you some indication of the size of inventory losses in relation to the total profit or loss in industry as a whole, or even in a particular industry. The reason that I cannot do so is the very reason that makes this question such a vital one. The absence of such data renders it difficult to portray the subject in its proper perspective, and this, undoubtedly, is responsible for the failure of inventory problems to attract attention in proportion to their importance.

### *Subject Not New*

At this point it should be clear to most of you that my subject is not a new one. It is interesting to note that at the very first convention of the National Association of Cost Accountants, held at At-

lantic City in 1920, Mr. Lybrand spoke of many of the same problems that I shall discuss this afternoon. Ever since, the publications of the Association have contained a liberal sprinkling of papers relative to inventories. My justification for bringing it up again, after sixteen years of continual treatment is, first, that management generally is yet to be convinced of the need for more concentrated study on the subject, but particularly because I believe that cost accountants have grasped only a fraction of the opportunities open to them in assisting and guiding management toward improved inventory administration. It is this point which I wish to dwell upon especially.

I believe that many executives assume that the administration of inventories is essentially different from the administration of other phases of business activity. They frequently consider that the management of an asset, once in the possession of the company, presents little possibility for savings comparable with economies which can result from improvement in operating effectiveness, or from the direct reduction of expenses. Now management of inventories is an important factor in business administration, just as management of plant operations, and is sometimes productive of even greater savings. It is possible to analyze inventory costs for the purpose of securing reductions in expense in much the same way that analyses are made for the cost of the labor, material, or burden elements of expense. Only rarely, however, have accountants provided information to the executives in a manner which might be useful to them in studying the possibilities of profits accruing from a more scientific treatment of their inventory problems.

### *Inventory Costs Often Overlooked*

No discourse which has any relation to standard costs, as this one has, would be complete without drawing the usual comparison between the accountant who is concerned with the recording of history, and the cost accountant who wants to make history. But first, may I take the liberty to observe that even in the recording of history, accountants have not been altogether thorough and complete. There is frequently overlooked a category of expenses which do not make themselves evident in the inventory accounts and consequently are not ordinarily presented in such a manner as to establish the total amount of expense applicable to inventories. I refer to such items as interest on investment, taxes, insurance, space charges and handling costs. These are usually concealed among the manufacturing and selling expenses, and the failure to segregate those which are

applicable to inventories is undoubtedly responsible for the scant attention which they receive.

In addition to these charges, which we may describe as costs of possession and handling, there are also costs of uncertain recurrence and amount, such as losses from spoilage, damage, theft, obsolescence, and price changes. While most accountants are quite meticulous in providing reserves against the accumulation of these inventory losses, they have devoted only meagre attention to the study of methods whereby such accumulations may be minimized. It is my hope today to point out the opportunities that exist for cost accountants and engineers in effecting such savings through the medium of studies and investigations which they are best qualified to conduct.

### *Interest Cost with Respect to Inventories*

The mere possession of an inventory entails certain costs which continue as long as the inventory remains. First, there is the interest on investment. Now, it is not my intention to introduce here this premier of all controversies; we shall be well enough supplied this afternoon with controversial aspects of the subject at hand.

I am reminded of a recent occasion when I had the pleasure of visiting the home of a member of an accounting firm. When I arrived I found that Junior, aged nine, had just returned from outdoors, bearing evidence of not altogether peaceable playtime activity. It seems that he had been engaged in a rough and tumble fight with the son of a member of a rival accounting firm.

I was very much amused by the admonition which Junior received from his mother after he had explained to her the cause of his encounter. She said, "Junior, there are three things which a gentleman just does not argue about: first, he does not argue about his religion; second, he does not argue about his politics; and third, he does not argue the subject of interest as a cost."

Now in the early days of my industrial experience, any mention of the subject of interest as a cost used to evoke quite a response; but as I have grown older I have become more tolerant of the ideas of other people, heretical as they may be. Nevertheless, while the subject of interest as a cost is not involved in today's discussion, there is a very practical aspect of the matter that we should consider.

If you have inventory as an asset on your balance sheet, and if on the other hand you have any liabilities in the form of bank loans or bonded indebtedness, you must concede that inventories do incur interest cost at least to the extent to which they are responsible for

such liabilities. In other words, if by proper inventory administration you could reduce your inventories by a given amount, you thereby reduce your indebtedness by an equivalent amount. Obviously the interest on such indebtedness must be attributed to the possession of inventories.

### *Other Costs of Inventories*

There are other elements of cost such as insurance and local property taxes, which represent real, out-of-pocket cash expenses. In addition, there are space charges, that is, charges for heat, light, building maintenance, and the like, or rent actually paid. The attitude of a good many industrial managers is that many of these inventory expenses will remain, regardless of any reduction in total inventories. When you tell an executive that his inventories are costing him eighteen per cent of value per year, he is likely to feel that a good portion of that eighteen per cent is fixed cost which is not reducible through reduction of inventory. Such conclusions usually develop as a result of inadequate cost information.

### *Space Charges*

Let us consider, for example, the item of space charges. Unless space is being rented and actual cash payments are being made for the rental, there is a tendency to minimize the importance of space charges. The common attitude is that these charges exist whether the space is occupied by inventories or not, and that consequently no gain would be realized by a reduction of the size of the inventory. In a large number of cases, however, the release of space occupied by inventories would result in cash savings.

In many instances it will be found that a company is renting space for manufacturing or for other purposes, and that a reduction of inventories would have made it possible to relinquish such rented quarters. In other cases space could be made available for expansion or rearrangement of plant and equipment which was very much to be desired, but which was being prevented through the lack of available space to carry out such projects.

It seems to me that it would be entirely reasonable to place the annual out-of-pocket cash cost ascribed to the ownership of inventory at ten per cent of the value of the inventory. Thus if you have an inventory of \$100,000 value, you are probably incurring an annual cash expense of \$10,000 per year, if your inventory and your general conditions are representative or average.

I know that it is dangerous and altogether misleading to deal with averages, and it would certainly be folly for any of you to proceed on the basis of such average figures. Each company must of necessity make its own computation and determine its own cash cost. Some of you have nearly ideal conditions with respect to all of these elements of cost. In some states the tax element may be very low; some products might require little or no insurance. But there are others where the cost would run very much higher than the figures I have indicated, and where the inducement for reduction of inventory is even greater.

*Losses from Depreciation, Obsolescence, Deterioration, Etc.*

The costs which I have discussed thus far are those which exist even under perfect administration and management of inventories. In addition, there are such costs as arise from physical depreciation, deterioration, obsolescence arising from style changes, and losses from damage and theft. For these elements of cost, I can do no better than cite a few examples. Obviously, there can be no such thing as representative costs for such items, as not only will the character of the business and industry influence them, but more especially the competence with which the inventory is managed.

One manufacturer of machine tools suffered a loss of six per cent of the value of all the products which he manufactured over a period of ten years. This loss was due largely to obsolescence. Another company in a similar period suffered a loss of nearly \$3,000,000, and while this represented less than one per cent of the cost of goods sold during that period, subsequent analysis showed that two-thirds of this loss could have been avoided. I think that it must be clear to all of you that great hazards are encountered in industries which have any style element. Shoe manufacturers, especially manufacturers of women's shoes, must be especially alert if they are to prevent disaster through inventory losses. The manufacturers of leather, garments and other clothing are in continuous jeopardy from the effects of style changes. Manufacturers of ink must change the style and design of their containers at intervals. Even kiddie cars are streamlined.

*Concerned with Factors in Developing a Control System*

It is not my purpose to present a disquisition on the subject of stock records and their benefits. The subject is already quite well known and the arguments for some mode of control through records

have been presented in writing and in speech many thousands of times. Those who are not yet convinced will certainly not be moved by any discourse of mine this afternoon. I think that I can make a much better contribution to the cause of inventory control by making a plea for more and better cost accounting as an aid to the control of inventories. Furthermore, most of you are well acquainted with many of the stock record systems in common use, so that I need not bore you with the details and mechanics of inventory control. The routine of operation of these plans can be made as simple or as complex as circumstances require, and if the plan is suitably designed to fit the business in which it is to operate, the expense of operation should be quite insignificant in comparison with its value. I think I can do much better by outlining to you some of the factors that should be considered in planning and developing a control system.

#### *Reasons for Lack of Emphasis on Inventory Problems*

I wish to emphasize one thing which has been partly responsible for excessive inventory costs and losses, and that is a lack of emphasis on inventory problems as such. Management will generally insist upon complete data and accurate calculations in cases where purchase of equipment or improved methods are involved, before arriving at important conclusions.

Very frequently, however, insufficient thought is given to the balance between inventory costs and increased manufacturing costs. Manufacturing lot quantities are established without striking a proper balance between savings which accrue from large quantity lots and inventory costs which accrue from the ownership of the inventories thus produced. Inventory costs deserve measurement and scrutiny as precise as that which is accorded manufacturing costs. When manufacturing convenience comes in conflict with wise inventory administration, it is the latter which suffers. This is so because the manufacturing case is well fortified with cost and other data, while inventory costs are seldom so completely established.

#### *Service to Customers and Low Inventories Do Not Conflict*

Frequently also we have an apparent conflict between the necessity for providing good service to customers and the desire to maintain inventories at a low level. Needless to say, the customers always win out. There is no real reason, however, why this conflict need exist, as service to customers and low inventories can exist together.

In the course of a recent study of cost accounting procedure which I made in a leather tannery, an interesting illustration of undue emphasis on service was brought to light. The products comprised a large number of kinds and colors of leather, and most of the items in the line had a relatively short style life. The quantities which were put into production, however, were always governed by a so-called economical minimum quantity, below which it was considered to be unprofitable to manufacture. There is always a certain amount of waste, more or less fixed in amount, which occurs when changing colors in the manufacturing process. In order to minimize the effect of this waste, quantities were processed without due regard for the sales possibilities of each kind and color of leather, with the result that large quantities of finished items found their way into finished goods stock, and these could be dislodged only by offering them at great sacrifices in price.

Of particular note in this instance was the fact that this company had in operation a complete and up-to-date stock record system, which provided the management with all essential information regarding the inventories and movements of each item. The company, however, had fallen into the error of assuming that the installation of a stock record system would manage its inventories, just as many executives once made a similar mistake in supposing that the installation of a wage incentive plan would of itself control and reduce costs and eliminate labor troubles. The effectiveness of the system, however, was very much reduced through failure of the management to make proper use of the information which the system provided. This was due to the fact that the cost department failed to provide certain essential information. While it was obvious that heavy continuous losses were being sustained through the mark-down of items which had become obsolete, it was nevertheless assumed that any change in the manufacturing procedure would be even more costly. When a study was made to ascertain the facts, it was found that the presumed minimum manufacturing quantities could be reduced in a large number of instances, and that the accompanying increase in manufacturing costs was only a fraction of the possible saving through reduction of losses from obsolescence.

### *Budgeting Inventories*

Budgeting of inventories is one of the most effective methods for the establishment of inventory control. A large number of companies have carried the principles of budgetary control to the great-

est degree of refinement in the control of manufacturing operations and selling expenses. A budget can be used equally effectively in the control of inventories. The starting point is a forecast of sales, exactly as in the case of the establishment of a manufacturing budget. The next step is to translate the sales schedule into production requirements. If the character of the business is reasonably stable, this is a relatively simple process, but in the case of companies which experience considerable fluctuation of selling volume with various seasons, the problem becomes considerably more complex. To begin with, a balance must be made between the feasibility of permitting manufacturing operations to fluctuate with sales, and the feasibility of building up inventories during periods of low sales volume to apply against the heavy demands of later seasons.

A problem of this kind can become truly difficult, as there are often many variable factors to be considered, some of which are often indeterminate. The frequency and cost of equipment setup is one of those factors. If a reliable sales forecast is available, a long range program can be developed which will insure a proper supply of goods when required.

#### *How the Sales Forecast Is Used for Inventory Budgeting*

In a blanket mill this was accomplished by preparing a forecast by various items manufactured for a period of several months in advance. This sales forecast was shown cumulatively by months, and against this forecast was recorded, for each item, the actual cumulative sales for the corresponding month. This made it possible for the management to determine necessary changes in the sales forecast. A production schedule was then developed with several points in view: first, to have the proper items on hand at the time that the sales forecast indicated that they would be required; second, to plan the use of manufacturing facilities in a manner which would utilize them to the greatest extent at periods of greatest sales activity; and third, to consider the desirability of carrying inventories in order to make possible longest production runs of a single item in order to obtain the attendant favorable costs by reducing the number of loom changes.

I should remark here, however, that forecasts prepared by the sales department should be subjected to some moderating influence before they are actually used for the budgeting of inventories. By nature and temperament, the accountant is generally best qualified to apply

the dose of pessimism which is needed to balance the enthusiasm of the sales department.

### *Engineering*

If we accept the premise that potential savings resulting from improved management of inventories can be as important as those arising from improvement of manufacturing operations, it follows that time and effort should be devoted to these problems comparable to that which is applied to manufacturing problems. If the cost accounting division can point out the advantages of such engineering work, not only with respect to possible reductions of manufacturing costs, but also with respect to important savings in inventory costs, a more powerful inducement will exist for embarking upon such a program.

### *Standardization and Simplification Effect Inventory Reductions*

For many years cost accountants have been bringing to the attention of plant executives the advantages of simplification and standardization of product, and the consequent saving in manufacturing costs. Generally speaking, manufacturing personnel has accepted the principle of simplification and has striven to reduce, as much as practicable, the different number of items in a given line.

The case for simplification could be made much stronger by demonstrating the possible savings in the handling and control of inventories, especially savings in obsolescence, which would result from such a simplification program. Those of you who have purchased automobiles this year have unquestionably noticed the marked reduction in total number of models which the manufacturers have designed; also the marked reduction in prices in comparison with previous years' models. There is a very definite relationship between the two, and the effect of such simplification upon inventory costs is not one of the least important factors which contributed to these reduced prices.

One truck company has just completed a new engineering program which comprises only thirteen different models, which will replace thirty-two models in the old schedule. Furthermore, several of the major units such as engines, axles, and transmissions, are interchangeable among several of these thirteen models. As a result, a smaller total number of parts will be necessary, with attendant reductions both in the size of inventories and the losses resulting from obsolescence.

*Engineering and Inventory Costs*

One of the causes for much of the obsolescence of material which one company has experienced, has been a failure to give adequate consideration to proposed design and engineering changes before they are permitted to take effect, with the result that large quantities of parts have been rendered obsolete because new specifications were made effective before inventories of superseded parts were exhausted. This is an example of common procedure in many companies, and exists only because no satisfactory coordination has been established between the engineering department and the stock control department. If the latter had been given an opportunity to show the effects of any proposed engineering changes, much of this loss could have been eliminated.

In the mechanical industries one frequent cause of obsolescence is failure to give adequate testing to new products before permitting them to go into production. Some very heavy losses of inventory have been experienced as a result of failures and weaknesses disclosed after the product has gone into the hands of the consumers. These, of course, require immediate correction, and any inventory of parts affected by such redesign becomes worthless. In many industries there is a tendency to rush new designs through to the production stage at the earliest possible date, or stated in another way, the time allotted for development, design and tool making, is not adequate. This has been especially true of the radio and the mechanical refrigeration industries, but all mechanical industries have suffered in this way to a certain extent.

*Manufacturing Methods*

Fortunately, the activities of the methods engineers, although usually directed towards improvements of, and reduction in, manufacturing costs, usually has a beneficial result with respect to the inventory. In one knitting mill, manufacturing men's fancy hose, there was an inventory of yarn which comprised 600 different items. The main reason for such a large number of different items was due to the fact that many different colors of each yarn were employed, and these colors were all kept in stock so as to be available when required. For the sake of manufacturing convenience it was decided to stock these yarns in the grey, and to dye them only in accordance with production requirements. The incidental benefit in the reduction of

obsolescence of yarn inventories far outweighed the disadvantages to manufacturing.

### *Planning and Scheduling*

The accomplishment of such a purpose, however, involves the establishment of suitable planning and scheduling procedure. As a matter of fact, the introduction of suitable planning and scheduling methods is one of the most, if not the most, effective means for reducing the amount of raw stock and work-in-process on hand. In no other way is it possible to establish raw stock and work-in-process inventories at a minimum level. In the case of the knitting mill which I have just cited, it was possible to eliminate stocks of colored yarns only because planning and scheduling was introduced. Obviously, if the production program was not to be disrupted, some planning had to be done in order to see that the necessary quantities of all yarns were available when needed.

An outstanding accomplishment resulting from the introduction of planning and scheduling methods occurred in a plant which manufactures machine tools. The company had had some sorrowful experiences in the past because of an uncontrolled manufacturing program which led directly to alarming losses from obsolescence. In order to avoid duplication of these disasters, the management decided that no part would be manufactured or purchased unless required for authorized production. Thus, if twelve machines were authorized for production, parts could be manufactured and purchased only for those twelve. This system was somewhat more drastic than it was intelligent. While it did accomplish its main objective, that is, the elimination of obsolescence losses, it had the effect of increasing the work-in-process inventories. This was so because some parts required a much greater period of time for manufacture or procurement than others, with the result that although large quantities of material and parts were on hand, they could not be employed in assembly until all other parts were available.

The real solution proved to be the establishment of planning and scheduling methods which took into consideration the varying intervals necessary for the various manufactured and purchased parts. Expressed in a most elementary form, the idea was to plan production and purchasing so as to have everything available on a given assembly date, rather than to start everything on a given date without regard to the respective time intervals required for their completion. Although parts orders in many cases were released for far greater

quantities than was indicated by the authorized assemblies, work-in-process inventories diminished in size and the risk of obsolescence was not increased.

### *Turnover*

A common method which is employed for the control of inventory quantities is through the calculation of turnover rates. The turnover provides an indication of the rapidity of movement of the inventories. Mathematically, it is expressed as a ratio of the value of merchandise moved during any given interval of time, to the average value of the inventory during the same interval. It is a measure of the effectiveness of utilization of capital in inventory.

A single overall turnover rate for all inventories in a company's possession, however, is not of any particular value to the management. It is somewhat analogous to a net profit and loss figure, which possesses a certain element of historical interest, but is relatively useless as a guide in the management and direction of its business. In order to uncover dormant items, it is necessary to have an analysis of the overall turnover rates which will permit observation and control of the various elements of the inventories.

An indiscriminate and forced increase in turnover rates, however, may cause more harm than good and may create expenses and increase cost in other directions which are not warranted. Here again it is the cost accountant who must balance the various advantages and disadvantages of increasing turnover, and determine the most desirable rate of turnover. To safeguard against the possibility of failure of sources of supply may often be more important than to secure a high inventory turnover; similarly, a possible gain from long-term contract commitments for staple materials frequently presents advantages that outweigh savings in inventory costs. This is not always true, however, and the inventory costs should be carefully balanced against the savings before such commitments are made.

Another important possibility which is frequently overlooked is the loss attending high labor turnover. Where the business is seasonal it would be a mistake to strive for maximum turnover without regard to the effect upon the employment of labor. If the manufacturing program is made to follow closely the variations of a widely fluctuating selling season, it follows that labor turnover must be correspondingly high. Labor turnover costs are much higher than is generally supposed, and while they vary in different industries it is

not unusual to find such costs amounting to more than \$100 per person.

### *Disposal of Obsolete Inventories*

The best operation of a stockroom requires the proper disposal of all raw materials and parts which have been determined to be obsolete. There is a tendency to keep items on hand long after there is any possible use for them, with the result that space must be provided, and they must be handled and inventoried for several successive years, thus incurring substantial avoidable expense. Many of the difficulties which exist in the operation of a stockroom arise from the presence of obsolete and slow-moving items which consume stockroom areas and incur clerical, handling and inventory costs which are out of proportion to their sales activities.

It is generally quite difficult to convince executives that they may incur certain substantial expenses if they do not make proper disposal of useless inventories. Handling and storage charges are frequently looked upon as being too intangible to be reckoned as actual or even as potential costs.

I know of one case where \$600,000 worth of an inventory of mechanical parts was moved from one location to another four separate times, in order to make space and facilities available for more active items, and this was done at a cost of many thousands of dollars. The ultimate realization from this inventory, exclusive of its scrap value when it was finally disposed of, was only a few hundred dollars. In spite of the fact that the obsolete character of this inventory was fully appreciated by the management, it had been retained in the hope of realizing some income from sales, but no study had ever been made to determine how costly such sales could be.

### *Methods*

A study of methods and procedure as related to the management of inventories is generally productive of favorable results. One such investigation, which was made in connection with branch inventories of service parts of a company which manufactured a mechanical product, proved to be especially valuable. The chief factor which governed the policy of the company was service to customers, and in pursuance of this policy a complete line of service parts was maintained at each branch. In many cases items were kept in stock at branches in order to serve an extremely occasional demand. Many

of these items were quite expensive and the aggregate in all the branches represented a substantial investment in inventory.

An analysis was made in order to determine the relative activity of the various service parts. Those which had only an occasional demand, amounting to perhaps one unit per year or less, were withdrawn from the branches and stocked only at the factory. In cases of emergency, orders were telegraphed and shipments expressed from the factory, but these extra costs were entirely warranted by the savings in inventory costs. Other service parts which had somewhat greater activity, but still in the slow-moving category, were reviewed for the purpose of reducing the quantities held at the branches. In one case where the branch was near enough to the factory to make possible overnight deliveries by freight, it was found to be worthwhile to install teletype service between the two points, so that orders could be immediately transmitted to the factory on receipt at the branch, and be delivered to the customer the next morning. The expense of teletype service was justified by the reduction in branch inventories, and the attendant saving in handling and other inventory costs.

#### *Physical Care and Condition of Inventories*

One very important aspect of inventory control is the physical care of stocks. This is an element which requires long and careful training on the part of the personnel both in the storerooms and in the manufacturing departments, so that employees may develop the idea that inventory is money and that it should be treated accordingly. Perhaps the most effective manner in which this can be done is to insist rigorously upon the greatest possible degree of neatness and orderliness. The risk of loss or damage can be overcome only with the most scrupulous care in the handling and storage of material.

Where carelessness is permitted, materials and parts become scattered on floors, benches and out-of-sight locations, with the result that much labor is frequently expended in searching for lost articles, and much that is valuable is swept up by the janitor. In the stockrooms, systematic arrangement is necessary if the stock department is to give good service to the manufacturing division, and if it is to do so at a reasonable cost. Executives sometimes question the justification of spending money to keep plant and storerooms neat and orderly. If they ever had occasion to calculate the cost of searching for a single missing part, or the cost of service prestige through a delay in delivery resulting from such loss, or the cost of stopping a

manufacturing operation for thirty minutes while a search was being made for necessary materials, they would find that a very small number of such incidents would pay for a tremendous amount of good housekeeping. Other losses which are avoided through proper handling and care are the evaporation and deterioration of fluid materials, the scratching and marring of fine finished surfaces, and the rusting of metals.

### *Influence of Accounting Methods on Control of Inventories*

One more phase of this subject remains: the use of standard costs in inventory valuations and in the preparation of financial statements. Standard costs is a favorite topic of mine, and I welcome this opportunity to discuss it in relation to inventory control. If you will have patience with me for a few moments, I promise not to bore you with a repetition of the usual theme on the propriety of applying standard costs to inventory values. Most of us are familiar with the arguments. The truly representative cost is one which has been predetermined on the basis of normal, attainable operating performance. The so-called actual costs are not actual costs at all; they are merely averages of past experience, and include not only the cost of manufacture but also the cost of avoidable and unnecessary waste, losses, and mistakes. For this reason, actual costs are more often than not improper costs.

I believe that we may start with the premise that certain costs are determinable accurately in advance, and that in so far as we confine ourselves to costs that are amenable to precise advance determination, such costs are the best that possibly can be employed.

Labor costs may be predetermined to a high degree of accuracy, burden costs may likewise be scientifically determined, and material usage allowances are similarly subject to precise measurement. It is clear, then, that any variation from standards for these elements must be due to sub-standard performance, and represents not a part of cost but a definite loss attributable to some failure of operation. There seems to be no logical reason, therefore, why inventories should be inflated in value by inclusion of such losses. It would seem that the better procedure is to charge these losses in the months in which they are incurred.

It has always been a matter of regret to me that the acceptance of standard costs in many quarters has depended not so much upon the logic of the situation, as upon the fact that the differences between standard cost and actual cost have so frequently proved to be negli-

gible. It is this point of view which was responsible for a great deal of dissatisfaction with many standard cost procedures during the early years of the depression, when commodity prices in many industries fluctuated so widely as to cause serious error in many of the financial statements developed from a standard cost basis.

### *Material Costs Need Special Treatment*

While standards for labor, burden, and material usage should always be possible of sufficiently precise determination to be used for balance sheet purposes, I think that a different attitude may well be taken with respect to raw material prices. These are not subject to similar accuracy of estimate, as there are involved too many external factors whose influence cannot be accurately determined in advance. Furthermore, I think it is fair to draw a distinction between variations due to sub-normal manufacturing performance, which as I have already explained should be directly charged as expense in the month in which they are incurred, and variations arising from non-manufacturing activities such as purchasing.

Even if we were able to apply the same degree of scientific precision to the determination of raw material prices, the question might still be raised as to whether such variation should be treated in a manner similar to those arising from manufacturing processes. Apart from this, however, it is certainly reasonable to question the propriety of including in cost and in inventory values, an element which depends so much upon the accuracy of a price forecast, and so little upon scientific determination. It seems to me, therefore, that it is necessary to adapt the common standard cost procedure to such circumstances. If this can be done, we may retain all of the advantages of standard costs, and eliminate the objections which in my opinion have been justifiably raised because of the effect that the usual procedure has had upon inventory valuation.

We should carry inventories at standard values, wherever possible, in order that physical verification and control through the books may be simplified. The inventory values shown on the balance sheet, however, should in my opinion conform to the usual formula of the lower of cost or market. While it is true that no serious objection can be raised against showing balance sheet values for purchased raw material at standard, where there is not too great a discrepancy between standard values and the lower of cost or market, still there are cases where an inventory shown at standard values on the balance sheet would represent a serious distortion of true values. This

has actually happened in many cases where market prices of raw materials were either increasing or decreasing rapidly, and where it was not practicable to change standards frequently enough so that standard values would conform to current conditions.

### *Treatment of Inventories in Statement of Profit and Loss*

The expressed purpose of the last-in, first-out method and the normal stock method of handling inventory is to show income in relation to current operations rather than in relation to fluctuation of inventory values. The general idea is to safeguard the management against adopting selling price policies which accrue a profit on the basis of original material costs but which would show no profit on the basis of replacement costs.

I prefer, however, to attack the problem from a slightly different point of view. There seems to be an element of paternalism on the part of cost accountants and engineers when they establish methods designed to protect management against its own frailties. In my opinion, the management should be given information in such form as to enable it to discern the various factors contributing to its profit and loss situation, but nevertheless leave it free to make its own decisions and establish financial policies without such restraint as that imposed by ultra-conservative financial statements.

I suggest, therefore, that some procedure be adopted whereby the management is apprised of the influence of market fluctuations on its statement of profit and loss, that is, separate the results from operations and from market fluctuations in price. This, the normal stock method, and the last-in, first-out method do not do; they merely minimize the influence of market fluctuations on profit and loss.

While the idea of leveling the effect of market fluctuations is commendable, we must recognize that every leveling process introduces a distortion of facts. If all industry could be induced to adopt such procedure, we might have as a result a stabilizing influence which would be a very good thing for our economic system, but under conditions that exist now and that are likely to exist for some time to come, there seems to be little justification for instituting a crusade against the effect of market fluctuations at the expense of distortion of facts in the financial statements.

### *Purchase Price Variance*

Now the standard cost system will go a long distance toward accomplishing a separation of market influences from the statement of

profit and loss, and this plan has been used by a large number of companies very successfully. In the ordinary business where market fluctuations are not serious, there probably does not exist a more satisfactory or more simple system to operate. Even where fluctuations of material prices do exist, it is possible to disclose the influence of changes in market values through the variance accounts which show the differences between the standard cost established and the actual market prices paid for raw materials. Ordinarily the difference between standard cost and actual cost is charged or credited to the variance account at the time the purchase is made. If the actual price paid is greater than standard the difference is taken as a loss in the month in which the purchase is made, and contrariwise, if the price paid is less than the standard, the difference is taken as the profit in that month.

This practice, however, does raise some objections because if purchases in a given period are greatly in excess of consumption for that period, and if the difference between standard and actual cost is appreciable, we can have conditions where inventory values and income statements will suffer distortion.

It is possible, however, to develop a treatment of inventory and variance accounts whereby the distortions will be eliminated. I have already pointed out the distinction between variances arising from abnormal labor and burden costs, and those resulting from price fluctuations. It is these latter which I wish to consider.

#### *Reserve for Purchase Price Variance*

Instead of carrying the difference between standard and actual purchase cost to profit and loss for the current period, we may charge or credit a reserve account instead. Thus if the actual cost of a commodity purchased is greater than the standard cost, we may charge the difference to a reserve for purchase loss or gain, and retain that difference in the reserve account until the goods are sold, at which time the reserve account may be credited for an amount equivalent to the variance applicable to the material content of the goods sold. If the standards have been properly chosen, the gains and losses will tend to offset each other, so as to result in only a small balance, either credit or debit, in the reserve account at the end of a given period. If, however, the trend of market prices is such as to create a substantial debit or credit balance, no particular harm is done by permitting this balance to remain in the reserve account as its only effect is to adjust the inventory account, which is

at standard values, to actual cost values. Similarly, the profit and loss statement will be on a proper basis as amounts will have been transferred from the reserve account to a purchase loss or gain account representing the variances applicable to goods sold.

If the balance in the reserve account becomes too great, and the prospect of offsetting balances is somewhat remote, standards may and probably should be changed. This procedure may also be carried out at the end of a fiscal year if standards are to be changed in anticipation of changes in market, regardless of any balance that may exist in the account. If, at the end of a fiscal year, the market value of goods in inventory is below cost, and it is desired to adjust the inventory values to market, this may be done by crediting the inventory account for the amount of such reduction, and instead of the offsetting debit being carried entirely to profit and loss, this reserve account may be debited with such portion of this adjustment as does not exceed the credit balance in the account.

#### *Accounting for Speculative Operations*

There are some industries, and certain conditions, however, which impose such severe requirements that the ordinary standard cost procedure is still somewhat inadequate, and does not show all the facts as completely as may be desired. Such industries are those which employ raw materials which fluctuate in price very widely from day to day, and include such commodities as copper, rubber, animal and vegetable fibres and leather. This is also true in industries where speculation in raw materials constitutes an important element in the business. Some industries, as a matter of fact, make relatively little profit from manufacturing and selling operations, and sometimes even incur a loss from operations over a long term of years, but through clever purchasing of raw materials are able to show very substantial profits.

This has been true in many textile mills. One large New England establishment of which I know, operated for a period of fifteen years making very handsome profits and paying liberal dividends, chiefly because of the ability of the men who were charged with the responsibility of purchasing cotton. An analysis of operations, however, would have disclosed that the entire manufacturing establishment, comprising several mills scattered throughout New England, had actually incurred losses for probably every year of that period. If those circumstances could have been anticipated, it certainly would have paid the owners of that establishment to confine their activities

entirely to speculation in the cotton market, and to save an investment of many millions of dollars in plant.

In these industries which we are discussing, if a rise in price occurs in the basic commodity, there may also be a rise in price in the fabricated article. Usually, however, there is no definite relationship between the two. In the case of the leather industry, for example, hides may experience an increase in price and remain at the new upper level for a considerable period of time before the price of finished leather increases. Even then, the amount of increase in the price of finished leather is not generally comparable to the increase in the price of hides.

If in all these cases it were possible to hold the market price of raw material at a constant level, then obviously any fluctuations in the price of the finished commodity must be due either to internal manufacturing conditions which influence costs, or external competitive conditions; in any case, conditions which fall within ordinary operating circumstances. In other words, if we buy raw copper at eight cents, and two weeks later sell an article fabricated from that copper, and the market for raw copper has not changed during the interval, we may then assume that any profit or loss accruing from that transaction is purely operating profit or loss. On the other hand, if the market for raw copper has changed during the period, then there is always the probability that the price of the finished fabricated article has been influenced by that change in the copper market, and consequently that profit and loss includes an element of speculative profit or loss.

### *Separating Operating and Speculative Profits and Losses*

We can, however, secure a figure of operating profit and loss by assuming that the raw material cost of goods shipped is calculated at the prevailing price for such raw material on the day of shipment of the finished goods. Thus if our copper price has increased to ten cents in the two-week interval, the material cost of any article shipped at the end of that time will be calculated on the basis of ten-cent copper. This means that the cost of goods shipped will have to be figured at two different material prices. At the end of the month it will be possible to accumulate the difference between the prices actually paid for the raw material content of goods sold, and the replacement cost prices on the day of shipment of finished articles, thus giving a division between operating and speculative profit and

loss. This may be shown in the form of a notation on the profit and loss statement.

We have then all of the essential information which the management may desire with respect to the division of profit or loss between operations and speculation. Knowing this, it can if it desires conduct the affairs of the company in accordance with the results of its operations, and if any profits accrue from the speculative enterprises, it may permit them to remain in special accounts and provide against the time when speculative losses will be suffered.

If I may be permitted, I wish to say a word with respect to the resolution which has been presented by Mr. Peloubet to this convention. I believe that it would be much more appropriate if such a resolution were considered after a very full and free discussion of the problem at hand.

As has been pointed out already, limitation of time has made impossible an adequate presentation of all of the important points, and a complete discussion of them in the session this afternoon. It seems to me, therefore, that we should consider carefully the importance of committing the Association to a matter of this kind without thorough and complete consideration.

Furthermore, I think that we should consider also the fact that the Association has a membership of between five and six thousand persons, of which only a few hundred are present. For that reason, also, it seems to me only proper that we should defer judgment upon the proposed resolution.

CHAIRMAN WALSH: Unfortunately, because of our limited time we shall have to eliminate any discussion of Mr. Gerofski's paper.

Someone has sent a note to the desk referring members to the Year Book of 1924 if they wish information about burden applied to inventories with respect to space and the like.

We have one more talk on the subject of inventories, and we are going to have to ask the last speaker to be a sort of mediator, so to speak, between the two stands taken on valuation of inventories.

Our next speaker is a man who has had academic training, and is able to look at this subject from that view, and he has also had practical training and can blend his practical experience with his academic training.

He was graduated from the University of Michigan in 1920 and taught at that university. Subsequently he taught in the University

of Iowa, and later went to Harvard where he is now teaching in the Graduate School of Business Administration. During his career, Professor Ross Walker, who is to be our next speaker, has acted as Executive Officer of textile mills in New England, and has advised as counsel to these mills. So I am going to ask Professor Walker if he will give us his opinions about inventory valuation.

I take pleasure in introducing Professor Ross Walker of the Harvard School of Business Administration. Professor Walker.

## SOME FINANCIAL QUESTIONS IN INVENTORY VALUATION

ROSS G. WALKER

Professor of Accounting, Graduate School of Business  
Administration, Harvard University,  
Boston, Mass.

**B**ECAUSE of the time available, I am going to attempt only a few rambling remarks on the use of normal stocks in connection with the reporting of net income. I shall not take much of your time.

As you know, the National Lead Company has been reporting on the normal stock basis for a good many years. If I am not mistaken, they began accounting for net income on this basis for the year 1914. Prior to that year, the reports of this company to its stockholders were on a conservative basis equivalent for all practical purposes to the use of so-called normal stocks in the determination of operating return.

The International Harvester Company, if my memory is right, began to report on what is equivalent to the normal stock basis in the year 1917. However, the dates, although important, are of course not the crux of the matter.

If I have read the Year Book of the company correctly, Swift and Company first undertook to apply the base stock principle in reporting net income in the preparation of its accounts for the year 1934. The reserve for inventory price decline reported by this company as of the close of 1935 stood at some sixteen millions against a total inventory of something short of a hundred millions. The Swift and Company reserve for 1935 was a little less than half the profits which would have been reported under our conventional first-in, first-out, or chronological method.

*Inventory Price Adjustment and Reported Net Income*

There is one fact about Swift and Company which is certainly worth calling to your attention. This company reports the price adjustment in the income account as a deduction from what is termed "net income" before showing "surplus for the year."

The Harvester company makes its adjustment before reporting "profit for the year" along with debits for depreciation, maintenance and provision for bad debts. This company deducted \$3,500,000 for 1934, leaving a profit of \$3,948,000.

Now it is an interesting comment on all of this, it seems to me, that in the pamphlet report of a prominent investment counsel house we find the net income of Swift and Company for both 1934 and 1935 reported at a figure per share as determined *before* the inventory adjustment, calling attention to the fact of this adjustment in a remote section of the pamphlet. And, mind you, no amount is given.

In this self-same report the net income of International Harvester is shown as *after* the provision for inventory decline, with the same additional data, but no amounts given, and the net of the National Lead Company is tabulated without any particular reference to its underlying accounting.

Where does the investor get off if the original data meant anything in the first instance?

One further item: Back in 1916, 1917 or 1918, somewhere along there, two of the great agricultural implement manufacturing companies joined in submitting a brief to the Treasury Department asking that the Department allow the use of the normal stock method in reporting net income for tax purposes during abnormal war times. In that brief these companies spoke rather disparagingly, at least by implication, of the packing industry, as compared with the agricultural implement industry, with respect to the need for the adjustment implied in the normal stock practice. At that time the packing people showed a turnover of about seven times a year. The agricultural implement people had a turnover of about once in two to three years, I think it was. However, it does not make much difference whether we get the exact figures. The period of turnover was a very long one.

Then in 1933-1934 we find Swift and Company, certainly one of the foremost producers in the packing field, introducing to its stockholders what is equivalent to the normal stock adjustment to the conventional first-in, first-out practice of accounting for net income.

*Normal Stock Methods and True Net Income*

It seems to me worthwhile to think of the normal stock idea as a sort of family principle embracing a number of ways of adjusting the first-in, first-out method of reporting net income. One way is the use of the fixed-stock, base-price plan of inventory valuation; another is the accounting device of the last-in, first-out method of costing goods sold, which has recently been adopted (at least in general principle) by the American Petroleum Institute; and still a further form of adjustment of the conventional accounting is the employment of the executive or financial reserve which reflects the periodic increase in investment required to carry an assumed basic inventory. In my judgment, the important thing to bear in mind is that there is a principle at the heart of these methods, financial or economic, which is extremely vital to the sound administration of the operating results of business. Of course, just how the general or family principle should be applied to the particular situation is a matter requiring careful consideration, but I believe that the underlying objective is the thing worth remembering at all hazards. This objective has to do with the answer to the question: What is true net income? In this question lies the controlling issue.

I feel that this question has not been satisfactorily answered. It has been satisfactorily answered, in my judgment, in certain business situations by men who as a result of long years of experience have acquired the feeling for net income; but as a general matter the problems of income accounting still remain to be solved.

*The Fiscal Year and Income Determination*

In any case, the thought that one seems to find present throughout the reports and explanations of the companies which have adopted some application of the base-stock principle seems to be that net income should be confined to long-run net cash profits; that underlying any discussion as to what the net income of a business is, should be the thought that the reporting business is a continuing entity. Once you make these statements, they sound perfectly obvious, hardly needful of repetition, but they are like the old lady's spectacles which she loses on her forehead, continually overlooked or forgotten. We are misled by the ritual of the "bookkeeping cycle," which is wholly natural for us whose training emphasis has been upon bookkeeping and not upon business administration.

In commenting on British tax practice, after spending a long

period in the study of excess-profits taxation, Professor R. M. Haig made the statement that the great mistake in the United States is the excessive isolation of the individual fiscal year with respect to what constitutes net income. He said we never can hope for improvement in our tax practice until we get away from artificially isolating one year from another.

Most of you, I should suppose, are familiar with the statement made by Mr. George O. May a few years ago before the meeting of the American Institute of Accountants. It was something to this effect: "Accountants realize that income cannot with even approximate accuracy be allocated to a particular year, especially in the case of taxpayers carrying on an extensive and complex business. No year is sufficient unto itself; each year's operations are bound up with and dependent on the operations of earlier and later years. Consequently, any attribution of income to a single year in such cases must at best be no more than a very rough approximation based on accepted conventions. Many, however, who have not had much experience in such matters look on the income of a year as a definite, significant and even a precise thing." I call your attention particularly to the adjective "precise."

#### *Management Policies and the Basic Stock Method*

One or two more things, and I will sit down. Mr. H. T. Warshow, controller of the National Lead Company, wrote a very interesting article in 1922 bearing on this question of the use of normal stocks with respect to the problem of reporting net income to stockholders and creditors. In this article Mr. Warshow wrote as follows:

The leveling of inventory gains and losses, with the comparative stability of yearly profits which this method brings about, tends to develop a feeling of confidence among both the stockholders and the creditors. It always exerts a subconscious effect upon business policy which is very desirable. Prices of manufactured articles are kept in more proper relation to prices of raw material. The management is not elated by apparent prosperity or depressed by apparent losses. Such elation and depression are responsible for most business follies. The normal stock plan automatically creates a reserve, strengthens the basis of the credit, gives stability and makes expansion safe.

Mr. Warshow also speaks in another connection of the need for financing the increase in basic inventory costs, which need is indeed mentioned by other companies using the base stock principle. And in that connection, especially with reference to the new undistributed profits legislation, it is tempting to point out that certain types of

additional financing which a business may require must per force of logic be undertaken from within, not to mention the fact that resort cannot be had with practical convenience to the capital market for cyclical increases in inventory cost, nor to make up for depression losses of working capital.

One more thought from Mr. Warshaw's article, or the gist of it, is that the normal stock method should be used in any situation in which the amplitude of price fluctuation is a serious one, and in any situation in which a company has to "go long" with respect to certain stocks and cannot abandon the long position when and if the price situation becomes unfavorable.

Another writer in this general field of the treatment of the inventory in income accounting, Mr. George Putnam, economic adviser to Swift and Company, said in 1924, as follows:

The many uncertainties in the situation suggest that every well-managed business should have a paper profit reserve for a part, at least, of its inventory accretions during the past ten years, while for future accretions it should build up dollar-for-dollar reserves. If competitors insist on weakening themselves permanently, the time comes when they should be given a free hand to do so, without dragging others down with them. When they have spent their paper profits and are face to face with the necessity for paying off the mortgage, the business that has followed the conservative course of holding its paper profit in reserve can set a pace that improvident competitors will be unable to follow.

CHAIRMAN WALSH: I daresay we could have a very enjoyable discussion if time would permit, but the time is getting late. We are very much indebted to the speakers of today, Mr. Peloubet, Mr. Gerofski and Professor Walker, and even though we have no time for discussion, we at least have something to think about.

We hope you have had a very enjoyable day. We have tried to follow practical subjects, and I think we have succeeded in giving you new thoughts. We will now adjourn until tomorrow morning.

. . . The meeting adjourned at five-twenty o'clock . . .

SESSION V

THE BUDGETARY METHOD OF  
CONTROLLING DISTRIBUTION COSTS

THURSDAY MORNING, JUNE 25, 1936

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C. A. PACKARD, Controller, Worthington Pump and Machinery  
Corporation, Harrison, N. J., *Chairman*

A. C. NIELSEN was born in Chicago, Illinois. He received his training as an electrical engineer from the University of Wisconsin, obtaining the B.S. degree from that institution in 1918. After a year in the Navy during the war, he was employed by the Isko Company of Chicago, manufacturers of refrigerating machinery. Later he spent three years as an engineer for the publishing firm of H P Gould Company. In 1923 he organized and became President of the A. C. Nielsen Company, specializing in market research.

LEE SCHOENFELDT received his academic training at the University of Pennsylvania and the Harvard Business School. In 1927 he entered the field of business as manager of sales office for the Hat Corporation of America. In 1931 he joined the General Electric Company and is now Acting Manager of the Commercial Research Division of the Appliance and Merchandise Department with headquarters in Bridgeport, Connecticut. Mr. Schoenfeldt is a member of the American Statistical Association and the American Marketing Society.

A. B. GUNNARSON is a graduate of the University of Minnesota and the Harvard Graduate School of Business Administration. He supplemented this training through serving as an instructor in accounting at both institutions. He was at one time connected with the Harvard Bureau of Business Research. Later he became associated with Washburn-Crosby Company, Minneapolis, in accounting and statistical capacities. Then followed several years of experience as controller of a company engaged in retail food distribution. Coming to Washington in 1930 as a member of the staff of the Chamber of Commerce of the United States, he has devoted the last few years to studies of current business problems particularly as they are affected by the legislative proposals before Congress. He is now in charge of the National Chamber's activities in the field of domestic distribution. Active in the organization of the Washington Chapter in December, 1932, he served as its President until September 1, 1934. Elected a Director of the National Association in 1934, he has served as Director in Charge of Research since that time.

## THE BUDGETARY METHOD OF CONTROLLING DISTRIBUTION COSTS

CHAIRMAN REUWER: I would like to present today's Chairman to you, a worthy National Director of the National Association of Cost Accountants, representing New York Chapter, Controller of Worthington Pump and Machinery Company of Harrison, New Jersey. He has diligently prepared what I think is a splendid program for our Thursday morning session. I am glad to present Mr. Charles A. Packard.

CHAIRMAN PACKARD: At our Third International Cost Conference fourteen years ago one of the principal subjects on the technical program was the control of distribution costs. I am going to take the liberty of quoting just two comments made during the discussion at that session as recorded in our 1922 Year Book. The first of these comments is as follows:

In order to control sales and administrative expenses, they must be considered before incurred. They must be predetermined. In other words, a scientific budget must be prepared.

And the second:

It was very inspiring and very significant to me to note that this particular subject was given such an important part on the program. In reading the description of the discussion as stated in the program, I would like to suggest one change. It says that these particular items might well be given a good deal of attention. I would like to say that they *must* be given a good deal of attention very shortly.

Well, since that time we have given this subject considerable attention—in our annual conventions, in our chapter meetings, and in our publications. But have we made any real progress in this direction? Have we actually put into practice those refinements in distribution accounting which appeared so important and so necessary, in our discussions fourteen years ago?

Frankly, I believe that in general the answer to that question would have to be "No," although I am hopeful that our discussion this morning will prove otherwise.

I assume we are all agreed that the proper foundation for any

complete industrial budget should be a reasonably accurate predetermination of sales. With this in mind, your Committee thought that it would be desirable to have as our first speaker this morning a man who could give us some real pointers in the predetermination of sales, and we have been particularly fortunate in this respect.

Our first speaker was graduated from the University of Wisconsin in 1918. After a year in the Navy during the war, he served as an engineer with the Isko Company of Chicago, and then for three years in a similar capacity with the H. P. Gould Company.

In 1923 he organized and became President of the A. C. Nielsen Company, specializing in market research. Today it is the largest organization of its kind in the world. The Nielsen staff, operating continuously throughout every state of the Union, secures vital marketing statistics on which more than four hundred clients have based their sales and advertising programs and, I assume, their budgets.

This morning he is going to talk to us on the subject, "Continuous Marketing Research—a Vital Factor in the Control of Distribution Costs." I now take great pleasure in introducing to you, Mr. A. C. Nielsen.

## CONTINUOUS MARKETING RESEARCH—A VITAL FACTOR IN CONTROLLING DISTRIBUTION COSTS

A. C. NIELSEN

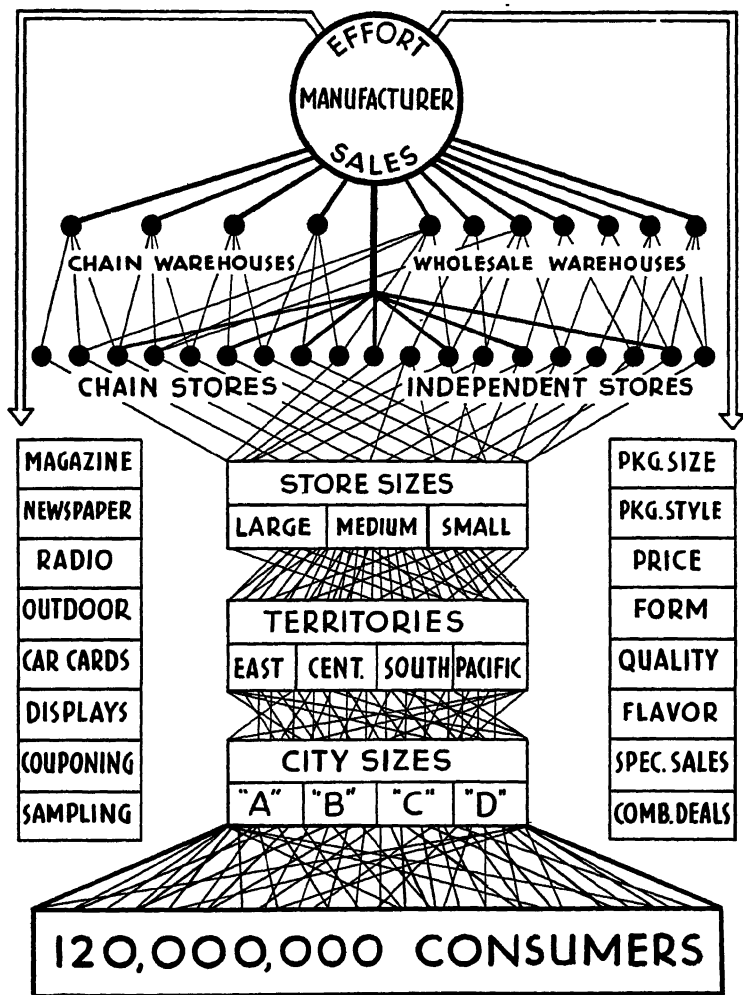
President, A. C. Nielsen Co.,  
Chicago, Ill.

OF all the figures with which the accounting department deals in the course of its operations, no one item is more important than the record of the company's sales, because nearly everything else depends on the sales volume.

From the standpoint of controlling marketing costs it is unfortunate that the only point at which you can ordinarily measure your sales is *the point of shipment from the factory*. The only sales record shown by your own books is the record of orders received or shipments made *at your factory*.

This type of record, while absolutely essential in controlling your fiscal operations, involves very serious limitations and dangers when used for controlling marketing policies. The reason is clearly shown by Chart I, which illustrates the flow of goods from the manufacturer

Chart I  
FLOW of CONSUMER GOODS



to his ultimate customers. This chart will apply with variations to almost any type of goods flowing to the consumer through wholesale and retail channels.

The manufacturer does not sell directly to the consumer but to chain and wholesale warehouses, who in turn ship to chain and independent retail stores. These retailers then sell to the ultimate consumers through markets of various types and stores of various types and in cities ranging in population from the largest (Class "A") to the smallest (Class "D").

The inventories in the chain and wholesale warehouses and in the retail stores are so great and they fluctuate so widely from month to month and from season to season (usually for reasons beyond your control), that the amount of orders received or goods shipped at the factory, in any given month, is usually quite different from the amount of goods moved into the hands of the consumers across the retail counters.

While this fact is appreciated in principle by nearly everyone, the *extent* to which the *consumer* sales differ from the *factory* sales is not appreciated by most executives.

It is vitally important to know the sales at the point of consumption, because your company may be spending money for various forms of advertising—magazine, newspaper, radio, outdoor, car cards, displays, etc.—to influence consumers, *i.e.*, to increase the flow of your goods at the point of consumption, and if there is no way of measuring the flow at this point, it is difficult and often impossible to know promptly and accurately the profits resulting from each merchandising or advertising expenditure.

If you commence a program of advertising on the first of January, your *factory* sales or shipments for the next few months will not ordinarily be a true indication of the extent to which the new program or change has affected your *consumer* sales.

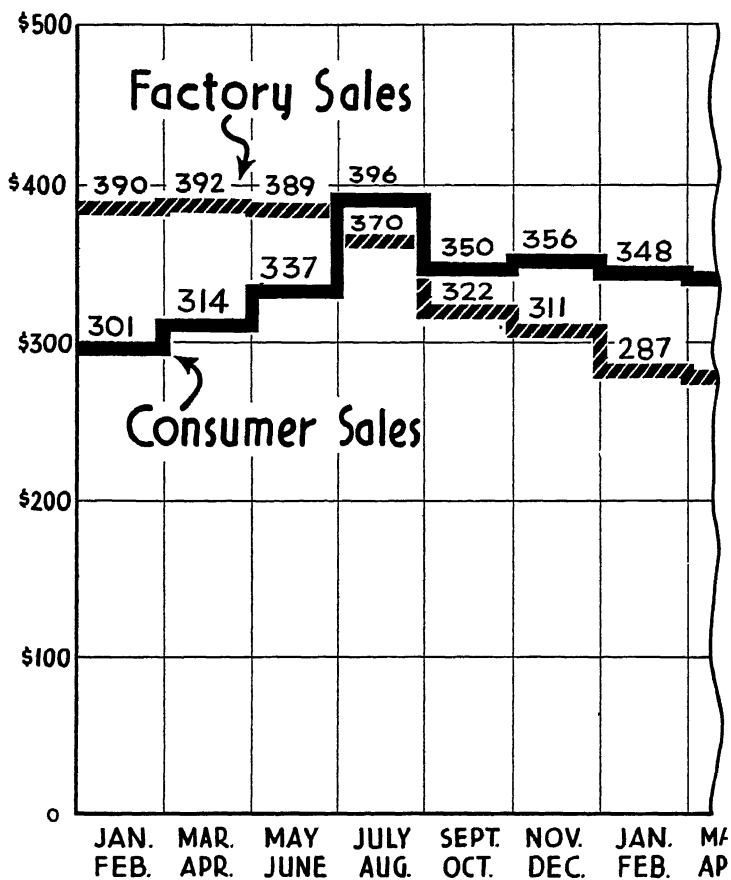
Chart II shows a typical contrast between *factory* sales and *consumer* sales. In many cases the difference between the two curves is much greater. These differences are due, of course, to fluctuating chain, wholesale and retail inventories.

### *How to Measure Consumer Sales*

Obviously, it is important to have a practical method of measuring consumer sales. The method developed by A. C. Nielsen Company, known as the *Nielsen Food and Drug Index*, is being used by leading corporations in the food, drug and allied industries. This service

Chart II  
**FACTORY SALES vs. CONSUMER SALES**

(\$000)



now covers grocery stores, grocery-meat stores, drug stores, department stores and country general stores, and hence applies principally to foods, drugs, toiletries, cosmetics and allied lines. However, the method can readily be applied to most products sold at retail.

Chart III shows how this service operates in the food industry. About 2,000 retail food stores have been selected in such a manner that they comprise a true sample or cross section of the entire country. This requires correct proportioning by territories, cities, city-sizes, store-types, store-sizes, class of neighborhood, and dozens of other factors. The stores are located in 700 carefully selected cities. The U. S. Census of Distribution is the principal basis for this work of store selection.

A permanent contract is made with each store and with the headquarters of each chain organization, under the terms of which A. C. Nielsen Company has the privilege of taking inventories and auditing the invoices for all goods coming into the store.

These two basic pieces of information provide the foundation for a comprehensive service that strikes at the heart of the most important marketing problems.

### *Principles of Store Auditing*

In so far as the *field* work is concerned, Chart IV illustrates the principles employed. In store No. 1287 let us determine the *consumer* sales of Calumet Baking Powder, 16-ounce size, for the bi-monthly period of January-February, 1936. An audit of the invoices which have accumulated during the bi-monthly period reveals that this store has placed one order directly with the manufacturer for 144 packages at \$23.04. It has also bought, from wholesale or other sources, three orders totaling 44 packages, for \$7.92. Hence, a total of 188 packages has come into the store. Credits, returns, and non-consumer sales (*e.g.*, a split deal) amounted to 24 packages. Therefore, 164 packages is the *net* number coming into the store.

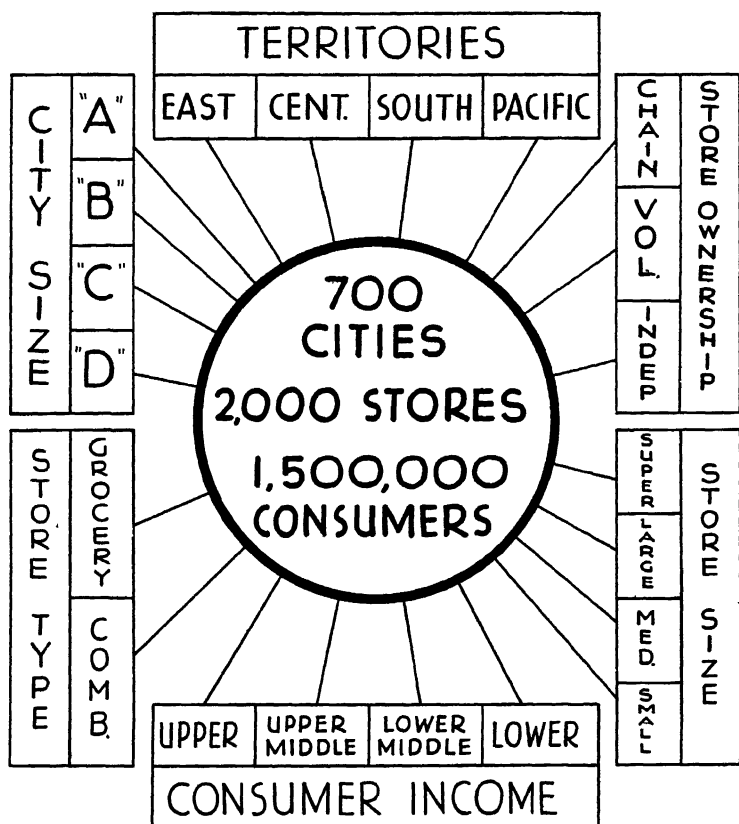
We take the inventory at the beginning and the end of the bi-monthly period, and find that there has been a decline of 56 packages. Adding this to the figure of 164, we find that 220 packages have *moved across retail counters to consumers*. Multiply by the price per package and we get the total consumer sales of this item in dollars.

Next we find out from the store whether there were various forms of merchandising during the period—couponing, premiums, window displays, inside advertising displays, inside goods displays and special

Chart III

**FOOD STORE SELECTION**

BASED on U.S. CENSUS of DISTRIBUTION



## Chart IV

PRINCIPLES of STORE AUDITING

STORE NO. 1287

PRODUCT COVERED: CALUMET BAKING POWDER

16 oz SIZE

PERIOD COVERED: JAN-FEB. 1936

	NO. OF		
PURCHASES (Jan.-Feb.) from invoices	ORDERS	PACKAGES	DOLLARS
DIRECT FROM MANUFACTURER	1	144	\$23.04
FROM WHOLESALERS & OTHER SOURCES	3	44	7.92
GROSS PURCHASES		188	\$30.96
Less Credits, Returns & Non-consumer Sales		24	3.84
NET PURCHASES		164	\$27.12
INVENTORY, JAN. 1		196	
INVENTORY, FEB. 28		140	
INVENTORY CHANGE		56	
CONSUMER SALES during Jan.-Feb.		220	
PRICE PER PKG. (to consumer)			\$.25
CONSUMER SALES (dollars)			\$55.00

OTHER DATA :COUPONING or PREMIUMS ☐ YES ☒ NODISPLAYS, WINDOW ☒ YES ☐ NODISPLAYS, INSIDE ADVERTISING ☐ YES ☒ NODISPLAYS, INSIDE GOODS ☐ YES ☒ NOSPECIAL SALES ☒ YES ☐ NOIF "YES", WHAT DURATION 2 DAYSAND WHAT PRICE \$.19TOTAL STORE SALES, JAN-FEB. \$38,415.20

Chart V

COMPLETE LIST of DATA SECURED

1. SALES TO CONSUMERS
2. PURCHASES BY RETAILERS
3. RETAIL INVENTORIES
4. STOCK-TURN
5. DISTRIBUTION
6. PRICES (WHOLESALE & RETAIL)
7. RETAIL GROSS PROFIT
8. DIRECT vs. WHOLESALE PURCHASES
9. AVERAGE ORDER SIZE
10. DEALER PUSH (DISPLAYS, SPECIALS, ETC)
11. TOTAL SALES-ALL COMMODITIES

**BROKEN DOWN BY:**

		TERRITORIES		CITIES		STORE PACKAGE	
BRANDS		STANDARD	CLIENT	POP RANGE	CITIES	TYPE & SIZE	SIZE
YOURS		EAST  CENTRAL  SOUTH  PACIFIC	1	A Over 1,000,000	NEW YORK	CHAIN  INDEPTS  SMALL Under \$30M	SMALL
COMPETITORS	A		2		PHILA.		
	B		3		BOSTON		
	C		4	BALTIMORE			
	Misc.		5	ATLANTA			
TOTAL			6	B 100M to 1,000M	DETROIT		MEDIUM
			7		CHICAGO		
			8		ST LOUIS		
			9	C 10M to 100M	CINCINNATI		LARGE
	10		NEW ORLEANS				
	11		SAN FRAN				
	12		D Under 10M	LOS ANGELES	GIANT		

sales. We find there were special sales for two days at nineteen cents. The total store volume on all commodities was \$38,415.20. By getting similar data from the entire group of 2,000 sample food stores and then multiplying the total by the following ratio:

$$\frac{\text{Sales of all U. S. food stores}}{\text{Sales of Nielsen Index food stores}}$$

we obtain the approximate total consumer sales of the product. Painstaking care in selecting the stores, combined with skilful, conscientious store auditing and meticulous checking of calculating and tabulating work produce results that are accurate within plus-or-minus two per cent. This has been demonstrated repeatedly by accepted statistical methods as well as various practical comparisons with clients' records.

Operation of the *Nielsen Food and Drug Index*, at its present volume, requires repetition of the above-described field auditing process more than 5,000,000 times annually—in order to determine the consumer sales of some 600 brands and sizes of various commodities in 3,200 food, drug and other stores spread throughout the forty-eight states. Each year more than 200,000,000 distinct pieces of data are obtained.

But this is merely the *field* work. The basic information obtained in these sample stores is then analyzed by means of tabulating machines to produce the vital facts shown in Chart V. Note that each piece of information is broken down by brands, territories, city-sizes, store-sizes, etc. These break-downs are essential to the solution of the practical marketing problems attacked by this service.

#### *How to Measure Competitors' Sales*

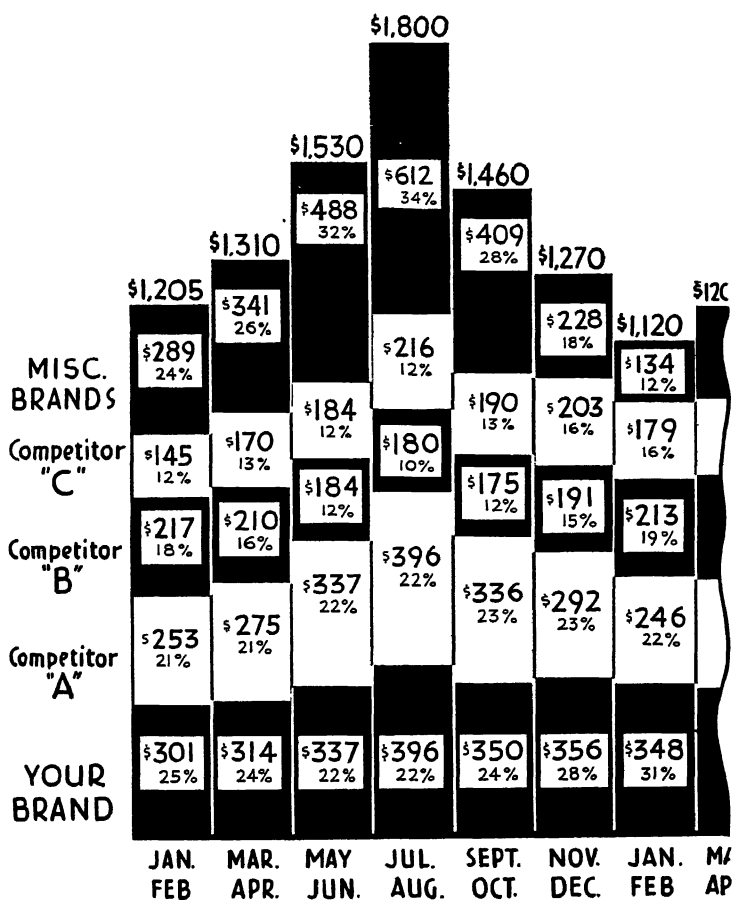
Your own consumer sales, however, provide only the first step in securing a true index of your progress in marketing, because there may be large fluctuations in the total market from month to month and season to season. These fluctuations are due to seasonal conditions, fluctuations in advertising volume, changes in consumer buying habits, epidemic conditions and many other factors.

These fluctuations in the total market render your own sales, even if you know them at the point of consumption, a poor index of your *competitive* progress. It is necessary to know not only the consumer sales of your own brand, but the consumer sales of your *competitors*. The *Nielsen Food and Drug Index*, by its very nature, can determine

# Chart VI

## CONSUMER SALES-ALL BRANDS

(\$000)



the consumer sales of *any* brand—yours or your competitors'. And the competitors' sales are furnished to you in a form far more useful than the factory sales figures shown on your competitors' own books.

### *Measuring Your Competitive Progress*

Chart VI shows the consumer sales of your product, with the competitive figures included, so we can see the consumer sales curve for the *total market*. Note that we can now secure *your percentage of the total market* in each of these periods. And you will observe periods when your consumer sales gained *in dollars*, but declined in *percentage of the total market*.

We can now plot the type of curve which is most useful from a marketing standpoint. Chart VII reproduces the factory sales (as shown previously in Chart II) and also the consumer sales, not in dollars but in *percentage of the total market*. Note that there are periods when you show a tremendous competitive gain in spite of declining factory sales. We have on record a number of cases where a company's *factory* sales have declined for as long as six or eight months, although their *competitive* standing in the total market was gaining at a steady pace.

### *Importance of Seasonal Characteristics*

Aside from its use in measuring your competitive progress, the total market curve is vital in that it reveals seasonal characteristics. Chart VIII shows, for a certain drug product, the curve of advertising expenditures for all brands combined. These companies peak their expenditures heavily in July and August, in the belief that maximum consumption occurs at that time.

Measurement of the actual consumer sales, however, shows that the peak of consumer buying comes in May and June—two months sooner. The manufacturer who possesses this information can cash in on it by moving his advertising peak to a position coinciding with or ahead of the peak of consumer buying.

Chart IX shows how a true knowledge of the seasonal movement of your goods can often reveal the relative effectiveness of two advertising themes. In this market, all advertisers use a "year 'round" appeal twelve months of the year; but there is also a special "winter-use" appeal which is employed by some of the advertisers and confined, of course, to the winter season.

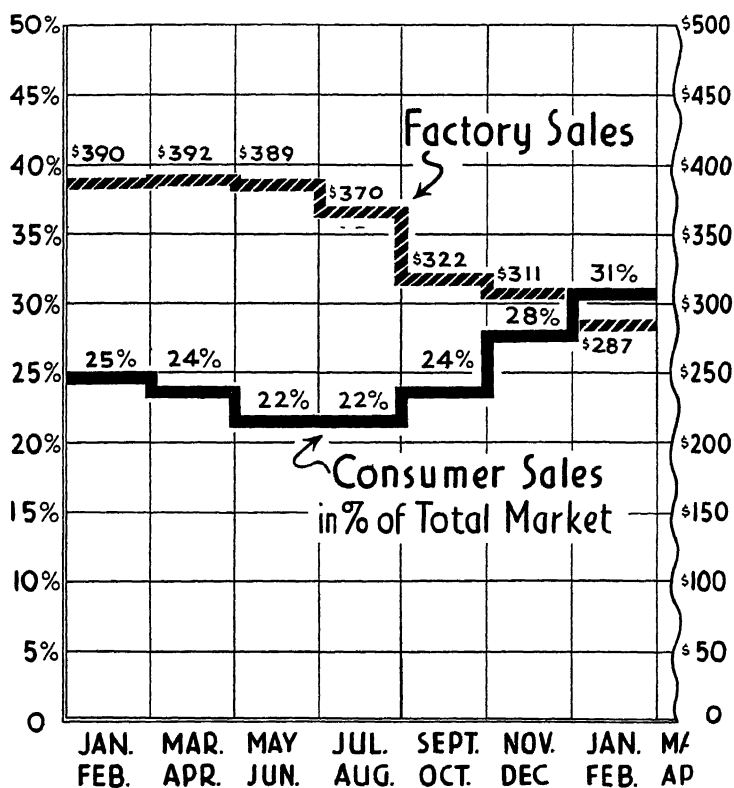
The left hand portion of Chart IX shows that the expenditure, during the winter, of large additional sums for the "winter-use"

Chart VII

**CONSUMER SALES**  
(IN PER CENT OF TOTAL MARKET)

vs.

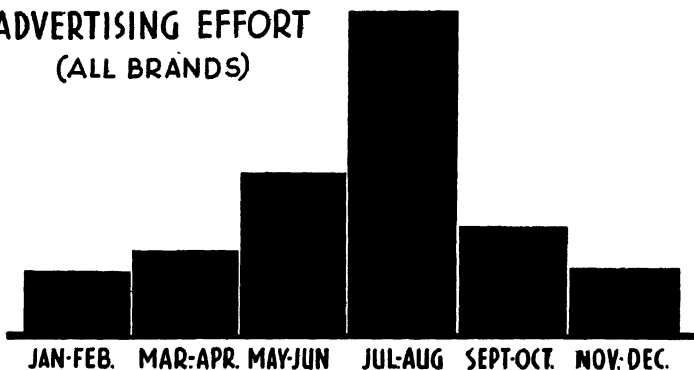
**FACTORY SALES**



## Chart VIII

# SEASONAL CHARACTERISTICS OF CONSUMER SALES CASE I

ADVERTISING EFFORT  
(ALL BRANDS)



CONSUMER  
SALES  
(ALL BRANDS)

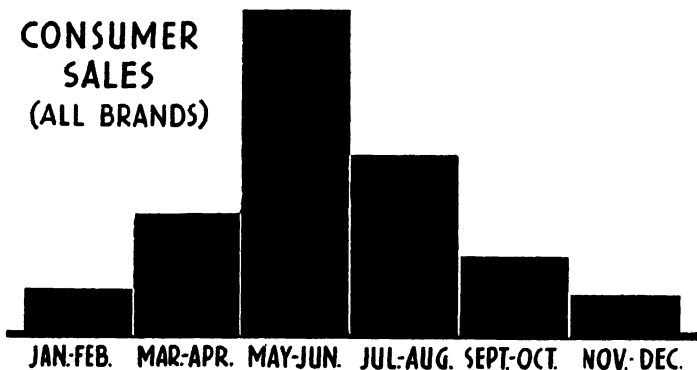
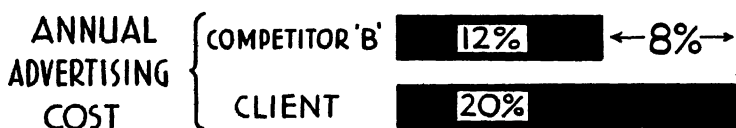
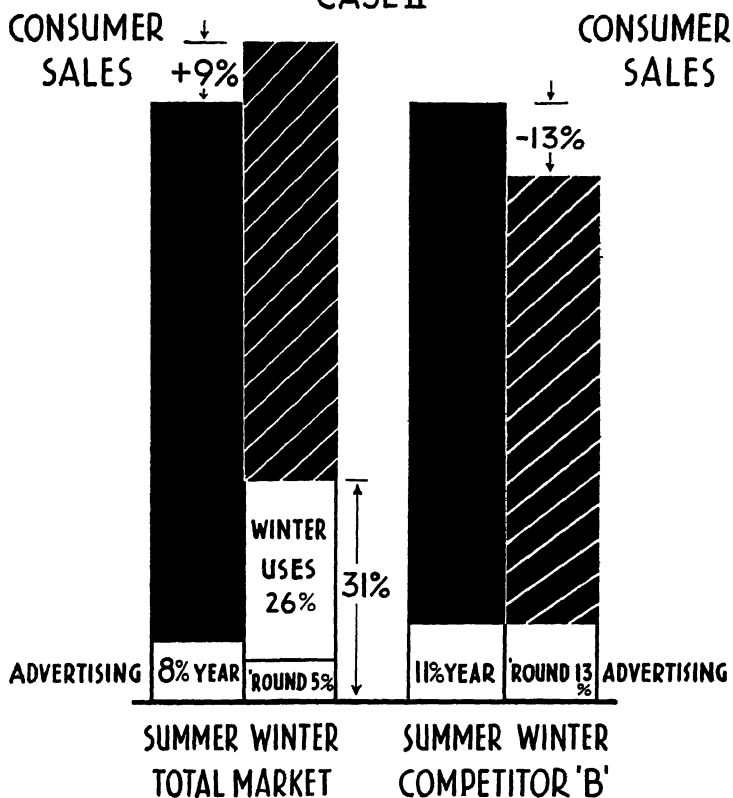


Chart IX

# SEASONAL CHARACTERISTICS OF CONSUMER SALES

CASE II



appeal produced only nine per cent increase in consumer sales—from which it seems fairly safe to conclude, tentatively at least, that this particular appeal is unprofitable. It may convert many *users* but it evidently creates the *use* of relatively little tonnage of the product.

This tentative conclusion is verified by the right hand portion of Chart IX, showing that competitor "B," who does not spend money for the "winter-use" appeal, suffers a sales decline of only thirteen per cent—in the face of tremendous increased expenditures by his competition. The lower portion of Chart IX shows that competitor "B" achieves a much lower average annual advertising cost by confining his expenditures to the "year-'round" appeal.

How can the other advertisers fail, year after year, to recognize this situation? The answer lies in the fact that their belief in the effectiveness of the "winter-use" appeal caused them, years ago, to establish the practice of offering loading deals to the trade during the winter. To take advantage of the extra discount and to cash in on the *alleged* winter increase in consumer use, chains, wholesalers and retailers kept their shelves heavily loaded during the winter. The *factory* sales of the manufacturers (except competitor "B") during the winter were almost double the summer volume. They made the error of attributing this increase to the "winter-use" advertising, whereas the lion's share of the increase merely represented increased stocks. Only through knowledge of the *consumer* sales was the truth revealed.

A third case illustrating the importance of knowing the true seasonal trend of consumer sales is shown by Chart X. While the *total* market shows no important seasonal variations (upper portion of the chart), a breakdown by city-sizes (lower portion of the chart) reveals a tremendous summer sales peak in the "D" cities (small towns). Such information has an obvious effect on the merchandising which should be done in the small towns during the summer months.

### *Measuring Sales by Store Types*

Chart XI shows another type of information, secured from your own factory sales records, which may be very misleading. At the left your factory shipments are broken down by types of customers. The chain stores take 23 per cent of your business; the large independents, 10 per cent; the medium independents, 11 per cent; and the small stores, 8 per cent. The balance of 48 per cent is sold to wholesalers, and you do not know what types of retailers ultimately take this portion. However, the *Nielsen Food and Drug Index*, by

Chart X

# SEASONAL CHARACTERISTICS OF CONSUMER SALES

CASE III

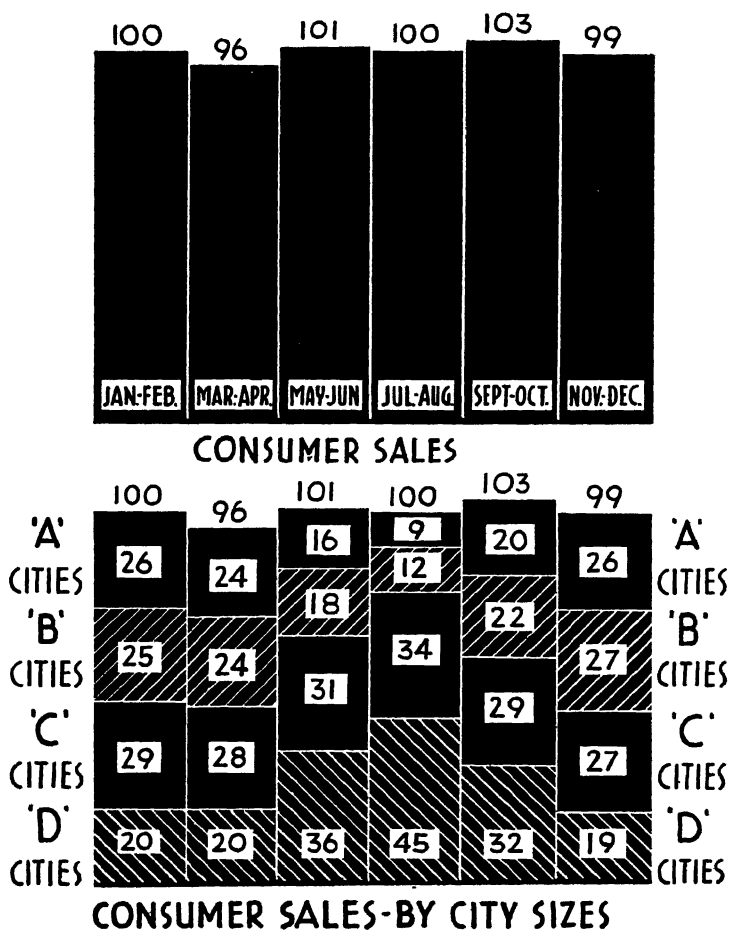
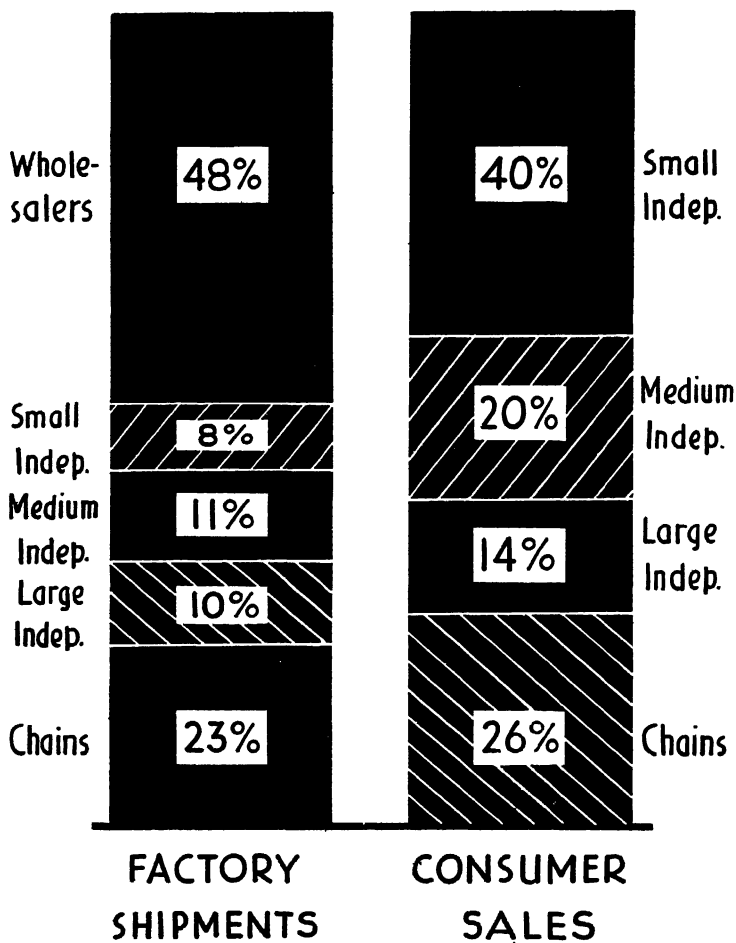


Chart XI  
**SALES BY STORE TYPES**



measuring consumer sales through retail stores, shows exactly how the total volume divides by store types. (See right-hand portion of Chart XI.) We now find that the chains are slightly more important than indicated by the factory records, which means that some of the smaller chains buy part of their requirements from wholesalers.

Large independents are buying a little from wholesalers. Medium-sized independents are buying more from the wholesalers, and the small independents are a very big factor, taking 40 per cent of the total market, whereas the factory records credited them with only 8 per cent. While no experienced sales executive would overlook the principles involved here, there is room for serious error in any *assumption* as to the proper distribution of the wholesale volume (48 per cent of total). Only by having the *facts* can the sales manager decide safely regarding the amount of sales effort that should be devoted to retailers of various sizes.

### *Measuring Sales by City-Sizes*

Chart XII analyzes your sales by *city-sizes*, the factory figures being shown at the left. As shown by the consumer sales breakdown (right-hand portion), the larger cities (e.g., Class "A") are far less important than your own factory records would suggest. This is due, of course, to the fact that chains and wholesalers are concentrated in the larger cities, and they reship your goods to retail stores in the smaller towns.

Any sales manager knows this, but no sales manager can tell *how much* to adjust his factory records in order to get the true city-size picture of the consumer market. This adjustment cannot be made on the basis of population or retail sales, for the *per capita* consumption of any given product may vary widely by size of city. We are checking some commodities which sell only 15 per cent of their total consumer volume in Class "D" cities (under 10,000 population), while others show as high as 60 per cent in these small places. How can retail sales effort or consumer advertising effort be distributed properly by city-size without knowledge of the city-size division of consumer sales?

### *Setting Territorial Quotas*

Let us now consider the all-important problem of setting sound quotas for each territory. Chart XIII covers three typical territories—enough to illustrate the principles involved.

A territory such as Metropolitan New York will show up abnor-

Chart XIII  
**SALES BY CITY-SIZES**

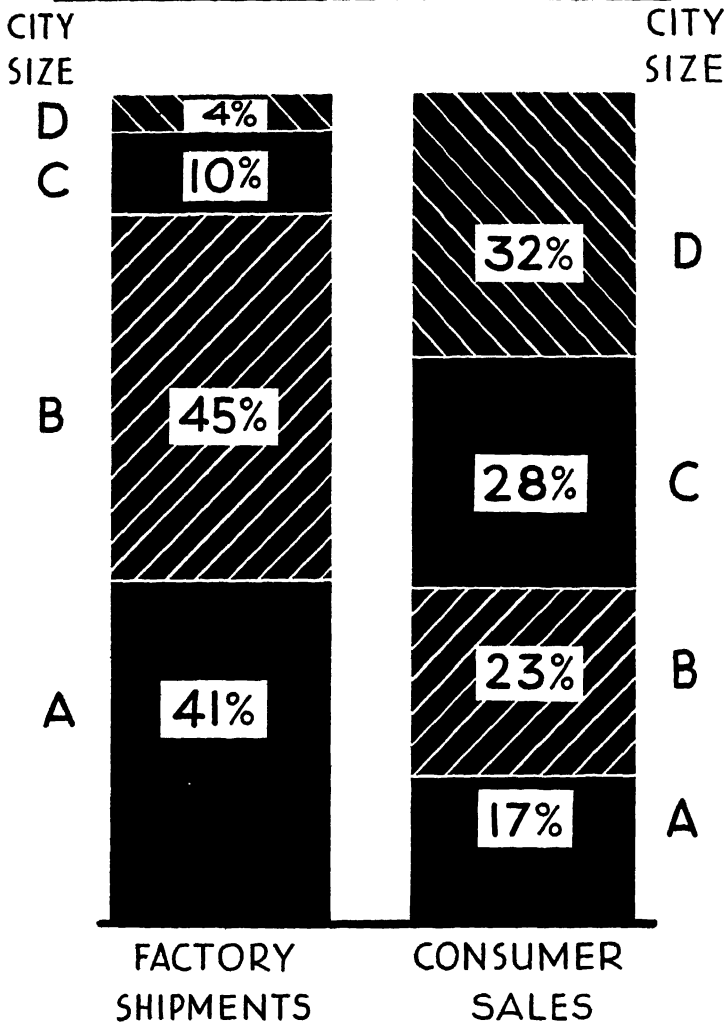
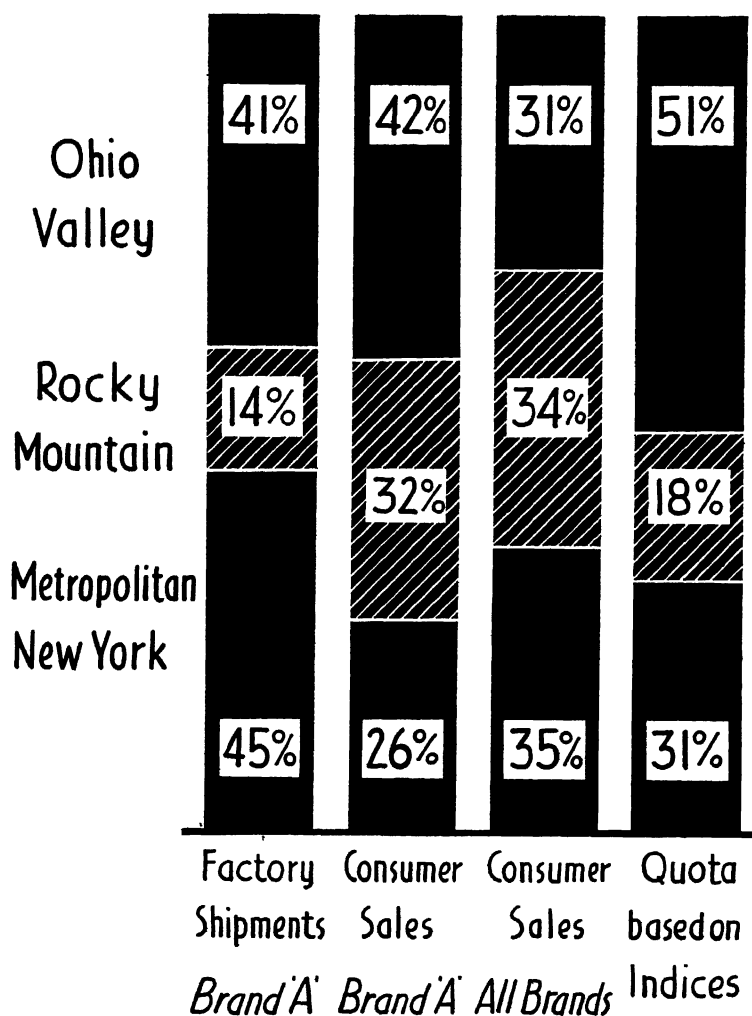


Chart XIII

## SALES BY TERRITORIES



mally strong on your own factory-shipment records, for much of the goods shipped to chains and wholesalers in such an area will be reshipped into surrounding territories containing fewer warehouses.

The second bar from the left shows the true *consumer* sales in Metropolitan New York, insofar as *your* brand is concerned. While such a figure, obtained at regular intervals, is vital in determining your true sales position and progress, a more useful figure for quota-setting is the one shown in the third bar from the left—*consumer sales of all brands*, i.e., the total volume of business existing in the territory, measured at the point of consumption. On this latter basis the New York territory is much more important than the consumer sales of *your own* brand would suggest. Here we have the soundest possible basis for setting sales quotas.

The right-hand bar in Chart XIII is based on certain indices commonly used in determining sales potentials and quotas, e.g., telephones, bank deposits, retail sales, etc. Without disparaging this method, it should be pointed out that it is, at best, merely an attempt to find some group of known factors which bears an approximate relationship to the true total consumer market. In the absence of consumer sales data, these factors must be selected either on the basis of *pure* guesswork *or* on the basis of multiple correlation with the territorial sales record of a *single* manufacturer. The use of pure guesswork can scarcely hope to produce a result worthy of confidence, and the correlation method involves two fundamental errors:

- (1) It must be based on factory shipments, although such shipments are not a sound index of actual consumption in any territory. (Compare the first two bars of Chart XIII.)
- (2) It must be based on the sales of a *single* company, whose sales in any given territory are not a true index of the total consumption of *all* brands—because the strength of any brand usually varies widely by territories. (Compare the second and third bars of Chart XIII.)

It is our conviction that the only sound basis for setting territorial quotas and potentials is the *consumer sales of all brands*. Determine this figure for each territory. Also determine, for each territory, your present *percentage* of the total consumer volume. Set quotas based on these figures, with due regard for territorial variations in the advertising efforts of your company and your competitors, variations in price, etc. Finally, repeat at regular intervals the determina-

tion of your percentage of each territory's total consumer volume, and use this trend as an index of your progress in attaining quotas.

### *Measuring Competitive Advertising*

As an aid in setting fair quotas, a record of competitive advertising is very helpful. Very few advertisers have done a thorough job of measuring competitive advertising expenditures, and breaking down these expenditures by territories, cities and city-sizes. Yet this can be done very readily with the aid of several outside services which furnish records of the newspaper, magazine and radio expenditures of each advertiser. These expenditures can be distributed territorially and by city-size through a study of the circulation of each publication, the coverage of each radio station and the radio set ownership in each county covered by each station.

While this work requires considerable patience, most of it can be done by inexpensive labor, and it is our experience that the results amply justify the cost. This is particularly true when consumer sales curves are available for each brand in each section of the market, because it is then possible to relate the advertising curves to the sales curves and reach many important conclusions regarding the relative effectiveness of various kinds and quantities of advertising.

Furthermore, it is difficult to determine sound sales quotas unless you know the advertising expenditures of each competitor in each area. We consider this work so important that a sizable department is devoted to the task of measuring and analyzing the expenditures of every *Nielsen Index* client and every one of his competitors.

In many companies, there may be an opportunity for the accounting department to perform this service for the sales department.

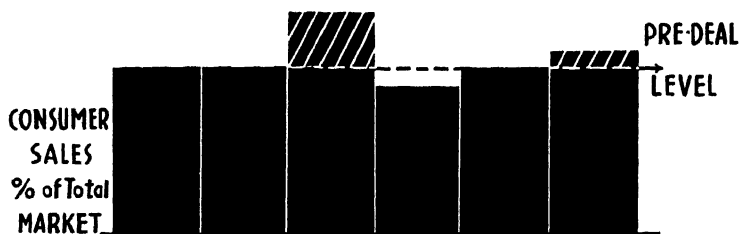
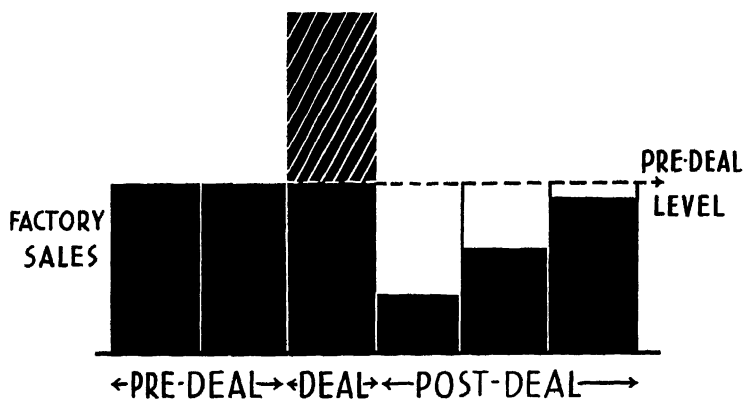
We have already seen several examples of the profitable use of consumer sales figures, but it should be made clear that the uses of such data are almost infinite in number. Let us look at a few of the more common means of increasing profits through a knowledge of these figures.

### *True Effect of Deals*

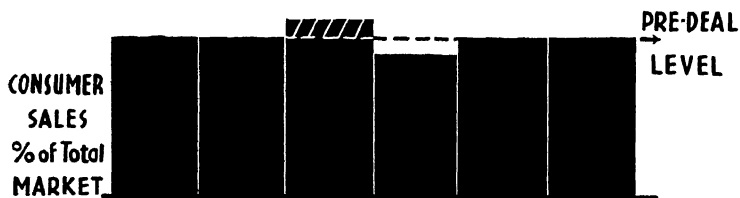
Chart XIV (upper section) shows what happens to the *factory* sales of a typical drug or food product when a deal is offered to the trade. There is a strong sales peak, followed by a valley, and several months usually elapse before factory sales return to normal. But no one knows exactly how long it takes to wash out the effect of the deal; and before this interval has elapsed, other forms of promotion,

Chart XIV

# A DEAL



## SUCCESS



## FAILURE

by this firm or its competitors, have masked the deal operation. Many manufacturers have used deals for years without reaching any definite conclusion as to whether they pay.

On the other hand, if *consumer* sales are available (center and lower sections of Chart XIV), the true effect of the deal can be determined. The difference between the successful deal and the failure may be so small (5, 10 or 15 per cent) that the *factory* sales curve, with its many inaccuracies, could not possibly reveal the difference.

### *Need for Product Change*

Chart XV shows how a knowledge of consumer sales, including competitors' sales, may reveal the need for a product change or a new product—and also show where to market the new product.

As shown in the upper section of Chart XV, brand No. 1 has been losing out to competition. In an effort to determine the reasons and the remedies for this condition, we analyzed the entire market by *type of product*, regardless of brand.

The center section of Chart XV shows that type "B" is rapidly displacing type "A," and since brand No. 1 falls in type "A," we have found the basic reason for the sales decline of brand No. 1.

If the manufacturer of this brand should then decide to change his product to type "B" or augment his line with a type "B," the lower section of Chart XV would prove valuable in deciding *where* to exert the first marketing efforts. Type "B" evidently sells most readily in the Southern and Pacific areas and in the smaller cities.

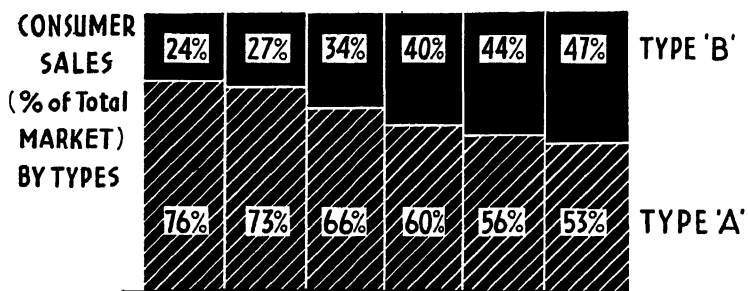
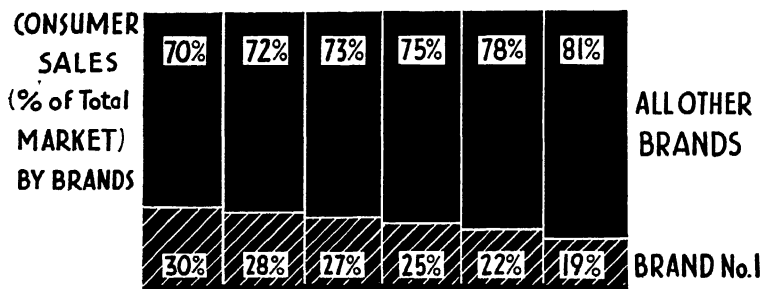
### *Protection Against Over-Expansion*

While on the subject of new products, let us consider the value of consumer sales figures in getting a true measurement of the success of a new product, and in determining a sound budget for a new product.

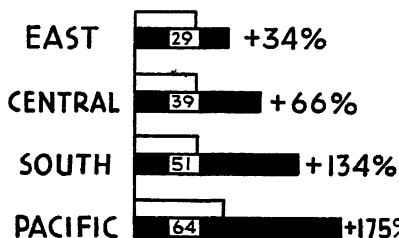
It is very difficult to get from your own factory sales records an accurate indication of the success of a new product. If there is any one thing we have learned from our *Nielsen Food and Drug Index* work, it is the fact that the average manufacturer is greatly deceived as to the success of a new product or package size or new style which he brings out. This is usually due to a combination of three factors. First, when the new product is launched, the chains, wholesalers and retailers begin to stock up, and the amount of goods required to stock the trade is far greater than the average manufacturer realizes.

Chart XV

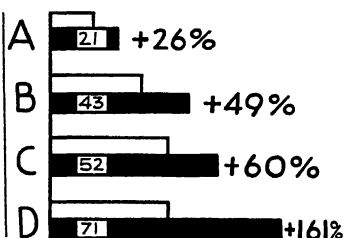
# NEED for PRODUCT CHANGE or NEW PRODUCT



## % OF TOTAL VOLUME OBTAINED BY TYPE 'B' TERRITORIES



## CITY SIZES



KEY Last Year This Year

Secondly, the distribution of the product in the stores is established rather quickly in the large cities where the company's own salesmen ordinarily operate. The executives of the company, who usually spend most of their time in the larger cities, see that the new product is stocked by nearly every store, and they jump to the conclusion that the distribution job has been completed, and that their future factory sales will furnish a true index of *consumer* movement. However, distribution may have reached 95 per cent in the large cities, while remaining at a level of only 20 per cent in the smaller towns. It takes far longer to get small-town and rural distribution than the average manufacturer realizes; hence the inventory-building process continues much longer than the average manufacturer believes. We have seen the process continue for two or three years after the manufacturer thought it had been completed.

Thirdly, the initial retail stocks *per store handling* are sometimes very small, because the retailer may doubt the salability of the new product. As the consumer demand grows, however, he increases his stocks.

The net result of the three factors is that for the first two, three or four years the factory shipments are usually a great deal larger than the consumer sales. And if, as is often the case, the company bases its advertising expenditures on factory sales rather than consumer sales, large expenditures may be made on a product which is not basically sound. There follows the inevitable sales slump, often followed by abandonment of the product. The company explains that the product "lost its popularity with consumers." As a matter of fact, it may *never* have enjoyed consumer popularity. The large temporary volume was due chiefly to the trade-loading operations of a big sales force, selling a new product backed by a famous name or a powerful company. Many of the most conspicuous failures of this type occur among the larger companies, for their reputation and their sales facilities enable them to load the trade most easily.

### *Determining the Results of Advertising Changes*

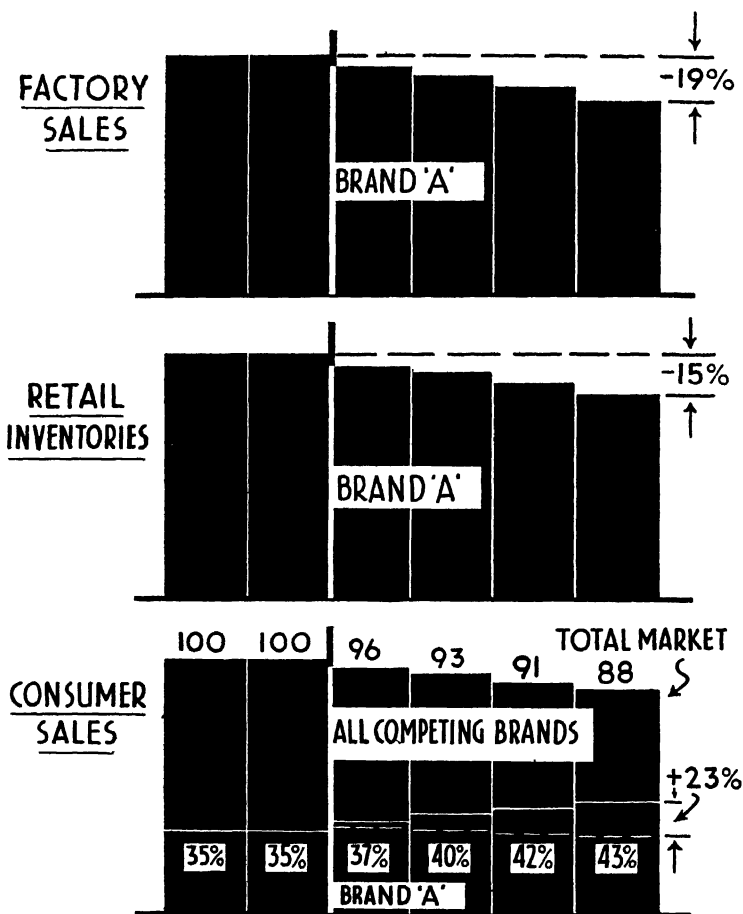
Let us consider next the problem of measuring the true effect of any change in advertising. (See Chart XVI.) Following the change, *factory* sales declined 19 per cent. If consumer sales figures were not available, we would probably have concluded that the advertising change was a mistake.

However, as shown by the center section of Chart XVI, retail inventories on this brand had declined 15 per cent and, as shown in

Chart XVI

# A CHANGE in ADVERTISING: CASE I

(QUANTITY · TYPE · COPY · MEDIA)



the lower section of Chart XVI, the total consumer market (all brands combined) had dropped 12 per cent, due to seasonal or other factors—with the result that sales of brand “A,” when measured at the point of consumption and when expressed as a percentage of the total available market, had actually *increased* from 35 per cent of the total market to 43 per cent, a competitive gain of 23 per cent. Therefore, the advertising change was a wise one, contrary to the evidence of the company’s own sales records.

Chart XVII shows the opposite situation. Factory sales, following the advertising change, *increased* 28 per cent. But this gain was due to increased retail stocks, combined with an increasing total market—the true result of the advertising change being a 20 per cent *decline* in competitive sales position. Again the factory sales curve would have misled the sales department and caused undue prolongation of an erroneous campaign.

Eventually, of course, the factory sales will show that an error was made, but valuable time has been lost and competition has made inroads. Furthermore, by the time factory sales reflect the results of any operation, several *other* operations have usually been started—and since the time lag varies for different types of promotion and is unknown anyway, it becomes exceedingly difficult to distinguish successful moves from unsuccessful ones. *Up-to-date knowledge of consumer sales helps in establishing profitable types of promotion.*

### *Time Lag of Factory Sales*

Many clients have asked us for figures on the time lag between factory sales and consumer sales. Knowledge of this lag should, theoretically, make it possible to determine, directly from factory sales, the effect of each marketing move, thus eliminating the need for consumer sales.

Unfortunately, the problem is not so simple. *Lag may be either positive or negative.* A powerful consumer campaign, without heavy merchandising work, causes consumer sales to increase first. Then, as stocks are depleted, factory orders from the trade begin to show a gain. On the other hand, a dealer loading operation will first cause a gain in *factory* sales. Then, as dealers increase their displays, special sales and other types of promotion, consumer sales will increase.

Even if the nature of the campaign makes it clear as to whether the lag will be positive or negative, the *amount* of the lag cannot be determined (unless consumer sales are known) for it will vary

Chart XVII

# A CHANGE in ADVERTISING: CASE II

(QUANTITY · TYPE · COPY · MEDIA)

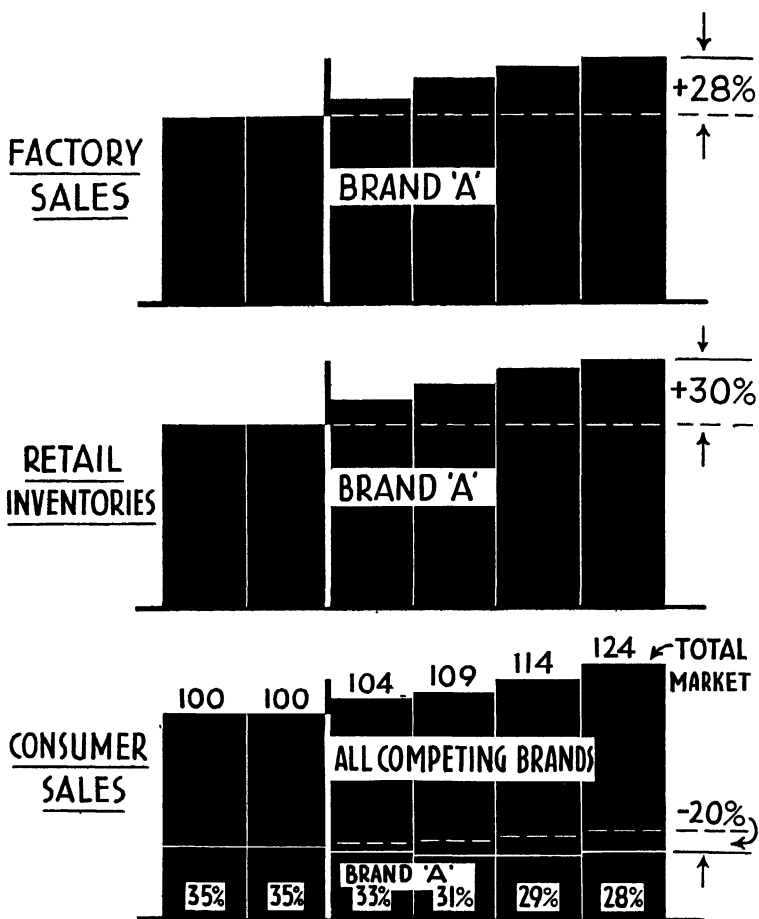
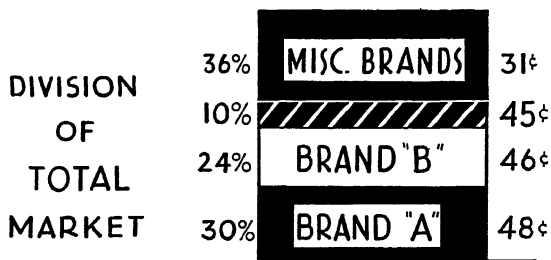
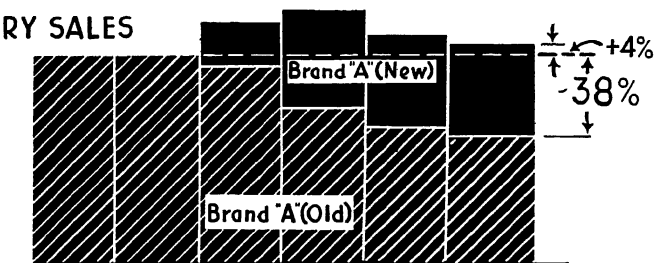


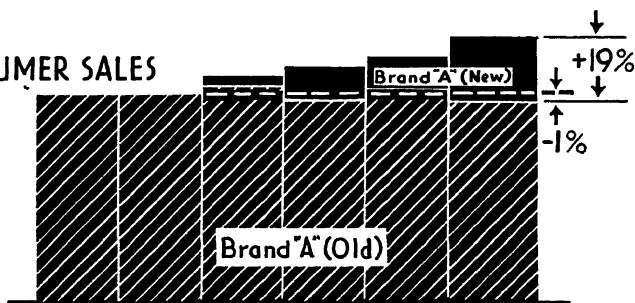
Chart XVIII

ADDING A LOWER-PRICED BRAND

## FACTORY SALES



## CONSUMER SALES



widely in accordance with the intensity of the promotion, the exact nature of the work, the condition of trade inventories at the opening of the campaign, the timing and nature of prior, simultaneous and later drives by *competitors*, and many other factors.

To determine the true effect of any type of promotion, a knowledge of consumer sales is necessary, including a knowledge of the consumer sales of competitors.

### *Adding a Low-Priced Brand*

When a lower-priced brand is added to the line, it is difficult to determine, from factory sales, whether the new, cheap brand has cut into the established, high-priced brand or whether, as hoped and intended, it has derived most of its volume from competition. Here again consumer sales figures tell the true story.

Chart XVIII (upper portion) induced the manufacturer of brand "A" to add a cheap brand, hoping to take a portion of the 31-cent business obtained by "Miscellaneous Brands." The middle portion of the chart shows the alarming condition revealed by his own factory shipments. His new, cheap, low-profit brand appeared to be displacing his established high-profit brand.

But the lower portion of Chart XVIII shows what really had occurred. Just prior to introduction of the cheap brand the trade had been overloaded with the high-priced brand; hence consumer sales of the latter had been able to continue at former levels in spite of lower factory orders. Except for this knowledge—which was based on consumer sales—the manufacturer would have been frightened into withdrawing his new, cheap brand from the market, although this brand has actually increased his total volume 19 per cent while damaging his established brand to the extent of only one per cent.

### *Results of Radio Advertising*

Measurement of radio advertising effect has proved a baffling problem where other forms of advertising are used simultaneously in sizable volume. Can knowledge of consumer sales aid in solving this problem?

Chart XIX shows (top portion) a fairly steady factory sales curve for a product using radio advertising plus magazines and newspapers. The advertiser wanted to know whether his radio expenditure was having an appreciable effect, or whether substantially equal volume could be enjoyed if it were dropped.

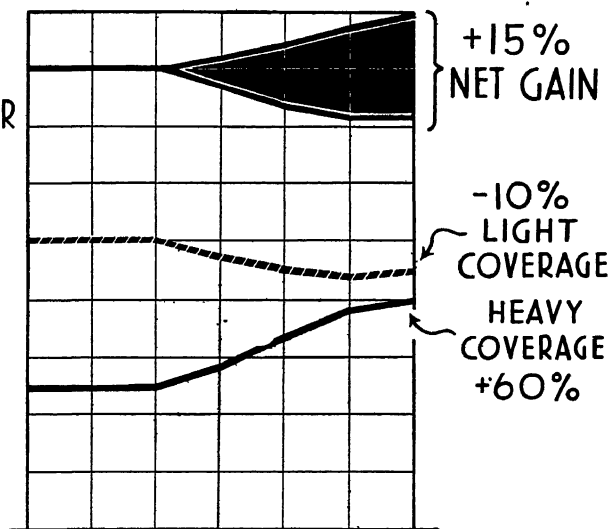
Chart XIX

# RADIO RESULTS

FACTORY  
SALES



CONSUMER  
SALES



The *Nielsen Food and Drug Index*, based on audits of retail store sales in 700 widely scattered cities in forty-eight states, naturally includes certain areas *heavily* covered by the broadcast and other areas covered only *lightly*. By means of tabulating machines, we separated the sales records of these two groups of stores, thus determining the consumer sales trend in heavily covered versus lightly covered areas.

After certain sub-analyses, to make sure that we had selected areas which were comparable in respects other than radio, we prepared the curves shown in the lower section of Chart XIX. The sharp contrast between the trends of the two curves proved that, in this particular case, the radio advertising was exerting a very substantial influence on sales. Many of the most important programs on the air have been subjected to this type of analysis, and in each case the results have determined the fate of the program.

#### *Advance Prediction of Results*

Thus far we have dealt with the problems of measuring accurately the results of moves *already made*. Now let us consider the equally vital problem of determining, *in advance*, the probable result of any proposed move.

Most of us have had the experience of making a large expenditure without getting commensurate results, and we have longed for some means of avoiding such costly errors and discovering profitable methods.

The *Nielsen Food and Drug Index* method of measuring consumer sales furnishes a means of pretesting, on a small, inexpensive scale, many of the more important types of promotion.

For this purpose we employ ten "test" cities in which we cover a very high percentage of the total stores, thus furnishing a highly accurate trend of consumer sales for each brand.

If it is desired to test the relative and/or the absolute values of two types of promotion, the test cities are divided into two groups, "A" and "B" (see Chart XX). First we determine, for several months, the "normal" position of your brand in each city-group.

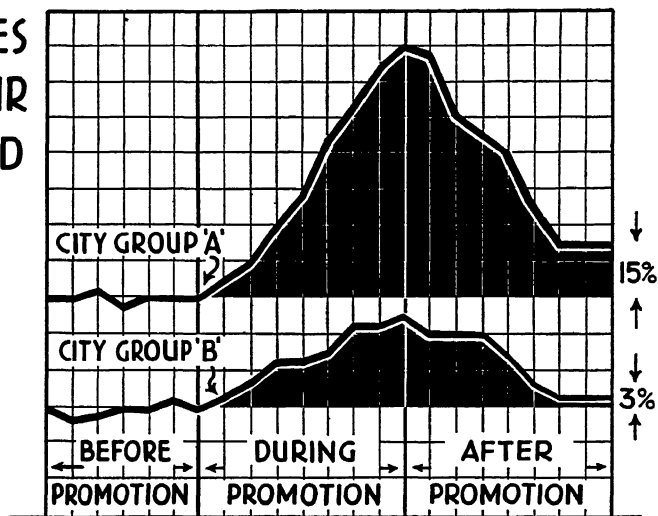
Then one type of promotion is applied to group "A" and the other to group "B." The relative gains in the consumer sales curves for the two groups are then compared. The relative areas under the two curves, and the relative increased levels after completion of the test show clearly the relative and absolute values of the two types of promotion. If the test cities have been properly selected from the

Chart XX

# TESTS (COMPARATIVE or ABSOLUTE)

## CONSUMER

## SALES of OUR BRAND



## SALES CURVES ARE CORRECTED FOR:

1. CHANGES IN TOTAL MARKET IN TESTING CITIES
2. CHANGES IN NATIONAL POSITION OF OUR BRAND
3. DIFFERENCES BETWEEN CITY GROUPS
  - A. DISTRIBUTION
  - B. PRICE
  - C. DISPLAY (WINDOW & INSIDE)
  - D. SPECIAL SALES
  - E. COMPETITIVE ADVERTISING

standpoint of size, geographical location, wealth, etc., the test results can be closely duplicated on a regional or national basis.

The lower portion of Chart XX lists some of the factors which must be applied as adjustments to the test curves. Failure to weigh and use these factors is one reason for the erratic and disappointing results obtained by many advertisers and agencies who have experimented with the store-audit method of testing. Among the other reasons for erratic results are inadequate store samples, unsound store-auditing methods, omission of chain stores and failure to check all competing products.

It has been our experience that this method, when conducted with a high degree of skill and with infinite attention to detail, will nearly always yield sound results.

#### *Types of Promotion Which Can Be Pretested*

Testing is commonly construed to mean "copy testing," and it is true that most testing methods are applicable only to the testing of advertising copy. The store-audit method, however, is equally applicable to the following types of promotion, all of which have been tested under our direction:

1. Advertising quantity
2. Advertising media (e.g. radio, newspapers, outdoor)
3. Cooperative advertising
4. Push money
5. Displays
6. Deals
7. Retail sales effort
8. Detailing of dentists, physicians, etc.
9. Sampling
10. Price changes
11. Package changes

It seems to us that the accounting executives could make an important contribution to the marketing efforts of their companies if they would urge upon their associates the importance of testing the effectiveness of every important expenditure before proceeding with it. Any accountant would certainly test a new type of accounting machine very thoroughly before spending \$500,000 or \$50,000 or even \$5,000 to buy the machine. It is just as important, if not more so, to pretest various forms of advertising and merchandising.

*Summary*

Your factory sales records must be interpreted with great caution when used for marketing purposes. Consumer sales, both in dollars and in per cent of total market, furnish a sounder basis for such purposes. Consumer sales can be obtained by well organized, continuous marketing research methods. The cost of this work, expressed in dollars, may seem high—\$10,000 to \$200,000 a year per company—but in proportion to the financial benefits derived from the infinite variety of practical uses, the cost is relatively small.

Many companies find that a single decision made because of the possession of these facts will pay the entire cost of a year's work. Almost any important marketing decision—one type of advertising versus another, a change in price, etc.—involves a stake as large as the annual cost of this work. Therefore, if the possession of these vital facts helps you to avoid one important error each year, the investment in such work will prove profitable.

The accounting and cost department can render a contribution to management by cooperating with the sales department in obtaining consumer sales figures and in the interpretation and application of such figures. Finally, the accounting executives can be of definite service by constantly emphasizing to their associates the fact that it is dangerous to base marketing decisions on factory sales, and that a knowledge of consumer sales is essential to the sound control of marketing.

CHAIRMAN PACKARD: It is hardly necessary for me to say, "Thank you, Mr. Nielsen."

I am sure you will agree that Mr. Nielsen has given us many new ideas on this subject which should prove helpful in the consideration of our own individual problems. He has shown us how many companies are solving this problem of predetermining sales. While the method he has outlined may not be applicable to the products in which some of us are interested, he has certainly left us with much food for thought on this one item which is so essential to the establishing of our budgets. I know that you will all be glad to learn that these excellent charts will be reproduced in the Year Book.

Now contrary to the practice that was followed in the previous two days' sessions, I am going to ask you to hold any questions until you have heard from the other two speakers. Our next speaker is a graduate of the University of Pennsylvania and the Harvard Busi-

ness School. He entered the field of business in 1927 as manager of the sales office of The Hat Corporation of America. In 1932 he became associated with the General Electric Company and is now Acting Manager of their Commercial Research Division with headquarters at Bridgeport, Connecticut. He is going to explain to us how his company controls the cost of distribution. I am pleased to present to you Mr. Lee Schoenfeldt.

## CONTROLLING DISTRIBUTION COSTS

LEE SCHOENFELDT

Acting Manager, Commercial Research Division,  
General Electric Co., Bridgeport, Conn.

**C**ONTROL of distribution costs is a serious but stimulating challenge to business. The half cents saved in manufacturing costs seem so easily dissipated in the lavish expenditures of distribution.

For many consumer products, \$60 in every \$100 retail sales is expended in getting the product from the end of the manufacturing line to the consumer who desires it. The product is in its finished form, but the subsequent process of conveying it to the consumer is laborious, involved and costly.

### *Manufacturer Concerned with Total Cost of Distribution*

Although a manufacturer may expend less than \$10 out of each \$100 of retail sales for his own distribution costs, he is directly concerned with the costs of the subsequent agencies in the distributive process. It is the retail price which includes the total cost of distribution from factory to ultimate consumer that determines the competitive position of the manufacturer's product in the consumer market. Therefore, we must give constant attention to the problems of distribution, and particularly the reduction of distribution costs.

### *Accounting Technique in Distribution Control*

The development of proper control techniques in the field of distribution will provide a partial solution to the problem of effective and economical distribution. The analytical accounting mind can contribute much to the solution of this problem. But just as the good cost accountant must be well versed in the details of the manufacturing process, so also must the analyst who attacks the distribution cost problem be well trained in the marketing process.

Cost accounting practice for manufacture goes far beyond keeping records of manufacturing expenses. It ties in closely with time studies, wage plans, machine efficiency, material waste. Distribution cost control likewise involves intimate knowledge of the factors affecting distribution, of consumer buying habits, channels of distribution, sales methods and techniques, and advertising.

It is sometimes thought that the distribution cost problem can be solved by the same procedures used in manufacturing cost accounting. It is questionable, however, whether such direct transfer of method can be made. The human element with its individual variations in capacity, actions and thoughts, looms large in the distributive picture, contrasting sharply with the importance of mechanisms in manufacture.

But two procedures used in accounting should be productive of successful results when applied to distribution costs. These two procedures are fundamental in the approach to the problem. The first is setting standards of operation in the form of sales budgets and sales expense budgets, and the second is auditing—the investigation of marketing procedures through surveys and studies.

Before going into the specialized applications of these accounting procedures to the control of distribution costs, it will be helpful to discuss the usual accounting approach to this problem. The accounting records afford a basis for comparison of expenses with the previous year, both in the absolute amount and in relation to sales. Expense variation as revealed by these comparisons gives a starting point for further investigations which frequently result in cost reduction.

The value of this accounting approach to the control of distribution costs should in no way be discounted. In fact, in its own practical way, it produces for most companies the bulk of economies which have so far been made in distribution costs.

These accounting procedures might be termed auditing of transactions. They have their origin in the expense accounts, and sometimes involve following the transaction through to the invoice. Effective control of distribution and of distribution costs goes beyond auditing of transactions, and involves a control of major marketing functions.

This broader concept of the control of distribution has been recognized, as evidenced by the formation of specialized divisions for market research, such as the Commercial Research Division of the General Electric Company, with which I am associated.

*Channels of Distribution*

A fundamental type of study leading toward the control and reduction of distribution costs is that which deals with the channels of distribution.

Without a doubt the distribution path frequently appears circuitous, and at times there seem to be parasitic elements hampering effective distribution. Naturally, the most direct route appeals to all of us. One lacking experience in distribution, when confronted with this problem, might choose the most direct route by eliminating distributors and even retailers. Such a procedure would result only too often in disastrous consequences to the manufacturer.

*Direct Sales*

Comparing these straight lines of distribution to an electrical conductor, perhaps the difficulty of many of these straight lines is that they are too tenuous. They might be compared to a number of individual strands of bell wire which cannot stand the load. The equivalent of the heavy lines of copper required to do the job of distribution frequently is supplied in the distribution system by the wholesaler.

Consider the channels of distribution for electrical appliances. What could be more alluring than the prospect of short-cutting the conventional distribution channels in the sale of these products? Most appliances have a high unit value and trade name acceptance. Because of this condition, attempts are continually being made to secure a direct line of distribution with few intermediaries.

Yet direct selling from manufacturer to consumer is not always a step forward in reducing distribution costs; usually this method is the most costly. Direct selling in electrical appliances is far from new. Some companies found direct selling necessary in order to educate the consumer in the use of new products by demonstrations.

*Selling Direct to Retailers*

But, for the great majority of manufacturers seeking mass distribution, direct selling is not feasible. The waste of time, effort, and expense involved in seeking out individual customers would be enormous, and the control of the necessary army of salesmen would be extremely difficult.

Another appealing channel of distribution is selling direct to retailers, and thus short-circuiting distributors. For many products

this is an effective means of reducing distributing costs. Yet for some types of products the method is not economical. Dr. Copeland of Harvard has often stated, "The cost inheres to the function, and not to the agency which performs it."

### *Selling Through Distributors*

To perform a national distribution job for electrical appliances at the lowest cost at the present time, the distributor has been found necessary. He carries on the mass distribution of products made by mass production. This channel carries the mass of product closer to the consumer, and breaks the mass into smaller pieces at the retail distribution point where the handling charges become greater.

### *Wholesalers' Distribution Costs*

Let us look at the wholesalers' costs of distribution in the electrical industry as shown on page 260.

What are the opportunities of cutting these costs? Expenses closely related to the physical movement of the goods loom large in the total. In reviewing this phase of distribution closely, we are impressed by the fact that to a large extent it is a continuation of the production assembly line. Conveyance labor and equipment, and records of movement, do not seem to add to the value of the product because its appearance and function remain unchanged; but the time and place utility of the product are greatly enhanced.

Expense reductions are being effected by distributors. Mechanization is being applied to the handling of merchandise, carload lots are sometimes routed through to dealers with no intervening handling by the distributor, and control is exercised in inventories and in the selling function. Cost reductions will undoubtedly continue to be made in this portion of the distributive process, but the opportunities for such reduction are not so great as is sometimes stated.

### *Special Marketing Studies*

Special studies of distribution channels and of operating expenses within existing channels are basic. They may result in economies of prime importance. In the same way through surveys and market studies the manufacturer can penetrate into almost every element of distribution and improve its effectiveness.

It is interesting to observe that some surveys may actually point toward the necessity for additional expenditures with, however, a reduction in the distribution cost percentage. This outlook, which

# Operating Costs of ELECTRICAL WHOLESALERS

<u>GROUPS AND ITEMS OF OPERATING COSTS</u>	<u>AVERAGE % TO TOTAL SALES ALL COMMODITIES</u>
<u>Investment in Merchandise</u>	
Interest @ 6% - - - - -	.4%
Insurance - - - - -	.15
Taxes - - - - -	.3
Repair Service (Net) - - - - -	.3
Mark down Losses - - - - -	.6
	<u>1.75</u>
<u>Warehousing</u>	
<u>Storage</u>	
Rent (Warehouse only) - - - - -	1.5
Light, Heat, Power, Janitor, etc.	.4
Depreciation & Repairs, Furniture & Fixtures - - - - -	.2
	<u>2.1</u>
<u>Handling</u>	
Warehouse Salaries (incl. Stock Records) - - - - -	1.5
Packing Materials - - - - -	.1
Cartage - In - - - - -	.15
" - Out - - - - -	.45
	<u>2.2</u>
<b>TOTAL WAREHOUSING</b>	<u>4.3</u>
<u>Office (Checking)</u>	
Salaries (incl. Sales Clerical) -	2.75
Rent (Office only) - - - - -	.2
Tel. & Tel., Stationery Supplies and Postage (except Adv.) etc. - -	1.0
	<u>3.95</u>
<u>Customer Contact</u>	
<u>Selling (Promotional)</u>	
Salaries (excl. Sales Clerical) -	3.2
Traveling & Entertainment - - - -	2.0
Advertising & Catalogs - - - - -	.4
Rent (Incl. Display Room) - - - -	.3
Trade Assoc. Dues, Contributions, Conventions, Exhibits, etc. - - -	.8
	<u>6.7</u>
<u>Appliance</u>	2.5
<u>Supply</u>	1.4
	.2
	.1
	<u>.3</u>
	4.5
	Ave. 5.5
<u>Reimbursement</u>	
Salaries (Accts. Rec. Cr. & Coll. Cashier) - - - - -	.7
Other - - - - -	.2
Bad Debt Losses - - - - -	1.0
Interest on Rec. Inv. @ 6% - - -	.6
	<u>2.5</u>
<b>GRAND TOTAL</b>	<b>18.0%</b>

may involve increased expenditures, reflects a further variance between the marketing investigation as compared with the usual accounting approach.

Among the most productive studies are those which project themselves out from the confines of account analysis into the domains of consumer demand and effective retail selling practices.

More specifically, these studies and surveys among consumers may involve style, new uses for the product, or price. A manufacturer's study in the retail field may reveal a need for more effective advertising, display, merchandising, salesmanship technique and store management.

Some of these problems may directly concern the sales sections or advertising departments. But I wish to emphasize that whatever the responsibility, study of these segments of the distribution problem may well bring about sizeable reductions in the selling expense ratio.

### *Studies of Dealers' Sales*

In addition to field surveys, other useful studies, consisting fundamentally of statistical analyses of performance, have yielded enlightening information. We have found, as probably all of you have found, that a relatively small percentage of our dealers were yielding the major portion of our sales.

To guide our action, we studied beyond that point, searching for characteristics common to the volume dealers in our lines. We made studies of the volume dealer to determine the size of dealer, the type and size of town, the type of dealer, the method of selling operation, and the number of lines handled. The results revealed that the dealers producing the most volume for us had these characteristics: (1) they handled a more complete line of our appliances, and (2) they operated more than the average number of outside salesmen.

This study, based primarily on sales records and supplemented by field work, pointed the way toward greater economy in our distributive effort. It indicated that we must sell more lines to the dealers on our books, and disclosed the type of operation producing the greatest volume of dealer sales.

Studies and surveys of the kind described are effective means of increasing sales and obtaining reductions in distribution costs. Such studies also form the test crucible of distribution practices, and through their use, standards for control of distribution are being constantly improved.

Directly concerned with the problem of distribution control is the establishment of standards in the form of sales budgets and sales expense budgets. The term "cost control in distribution" usually connotes budget control of sales expense, but to my mind the sales budget is so closely related to sales expense that one cannot be properly established without taking into consideration most of the factors affecting the other.

### *The Sales Budget*

The starting point in good practice, I believe, is with the sales budget. While the use of past sales, and past sales expense, may well be disparaged as the major element in the establishment of a scientific sales objective, they form the known points from which to proceed in the determination of a reasonably accurate total sales budget.

Our procedure in setting total sales budgets involves three major steps. First, we endeavor to forecast business conditions, conditions in the building industry, and other general factors which relate to a group of our individual product lines.

### *Forecasting General Business Conditions*

We have found a very definite relationship between an index of general business conditions and the sales of our appliance lines, and a similar relationship between sales of our wiring material lines, and a combined index of general business conditions and conditions in the building industry.

In our forecast of general business we make use of every possible method. We endeavor to secure from the leading services which publish indices of current business, a forecast into the future, and we request each of them to project its published general business curve through the budget period just ahead.

Experts in business forecasting vary in their opinions. They cannot all be 100 per cent correct, and they tend to hedge in making their forecasts. But the extension of the business curve by various authorities resolves the forecast to a tangible basis, and provides an external check upon our own calculations.

Our associates in other divisions of the General Electric Company at Bridgeport also submit their business forecasts to us. In the meanwhile, we in the Commercial Research Division make our own forecast. This is based upon barometers of general business such as machine tool orders, the long term movement of the investment

securities market, and other indicators of the trend of general business.

We also use what we term "deductive economic analysis," wherein judgment is brought into play to determine the relative effect of known facts and factors upon probable future trends. Such a procedure may appear academic, but the composite opinion from a number of active minds has proved helpful in securing a more accurate determination of business trends.

Most American businessmen are optimistic on future business—"hope springs eternal in the human breast." Therefore, in combining all these individual forecasts into one composite forecast, we consciously tend toward the conservative, and avoid "wishful thinking."

### *Relation of Industry to General Business*

Forecasting general business conditions is thus the first step in setting our sales budgets. Secondly, we determine the relationship of the individual industry figures with general business. See Chart on page 264. In determining this, we follow a procedure which has become increasingly favored in recent years. Through statistical means, we eliminate the long time growth trend from the industry figures, and compare the residual fluctuations with the general business curve. The comparison shown on the chart on page 265 is for the floor vacuum cleaner industry.

This forecast is made in terms of units of physical production. It is also necessary for us to forecast prices, because our sales budgets for most of our lines are on a dollar basis.

For price forecasts we rely to a considerable extent upon the judgment of our sales managers, in addition to our general studies. Prices, of course, are a function of many factors, but we give special attention to two of these factors; first, whether the type of unit to be sold in the coming year will be a lower- or a higher-priced unit; second, the price trend generally for the product.

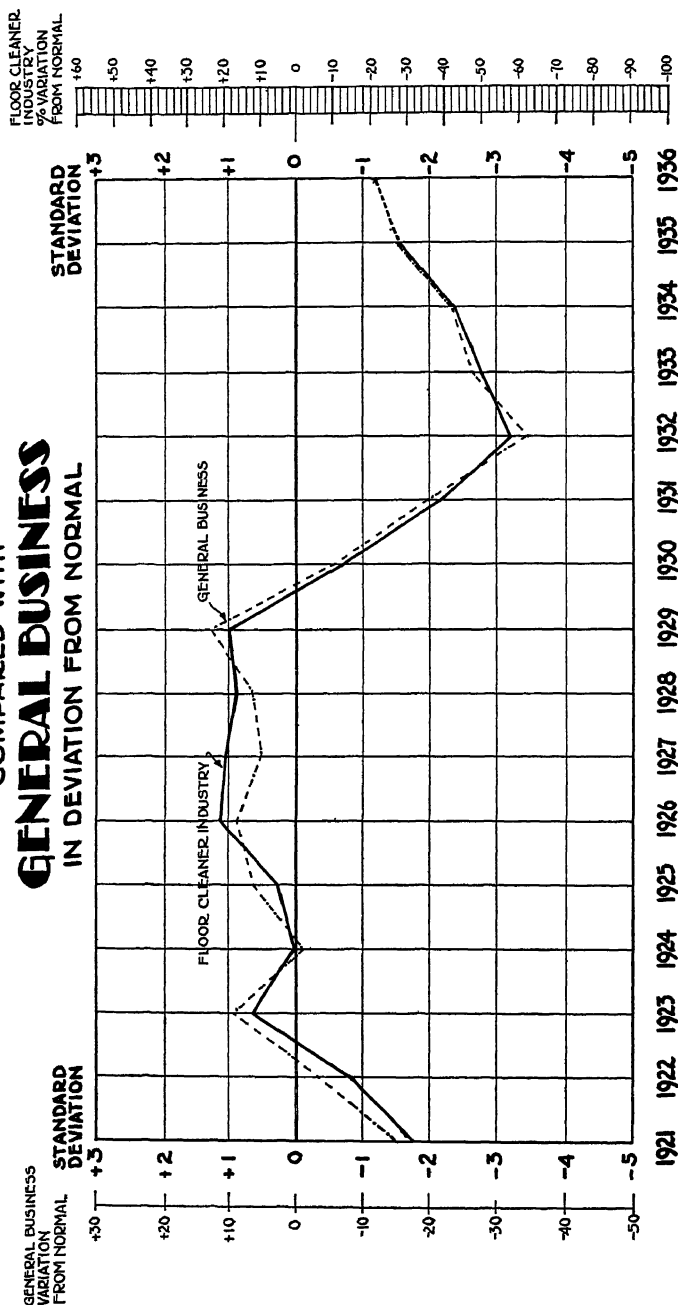
### *Forecasting Percentage of Industry Business by Trend*

At this point in our study we have secured a dollar total for the industry. We now come to the third important element in our sales budget, our percentage of the industry as indicated by the trend relationship over a long period of years.

This relationship translated into dollars is the sales estimate of the Commercial Research Division. It affords a tangible basis for dis-

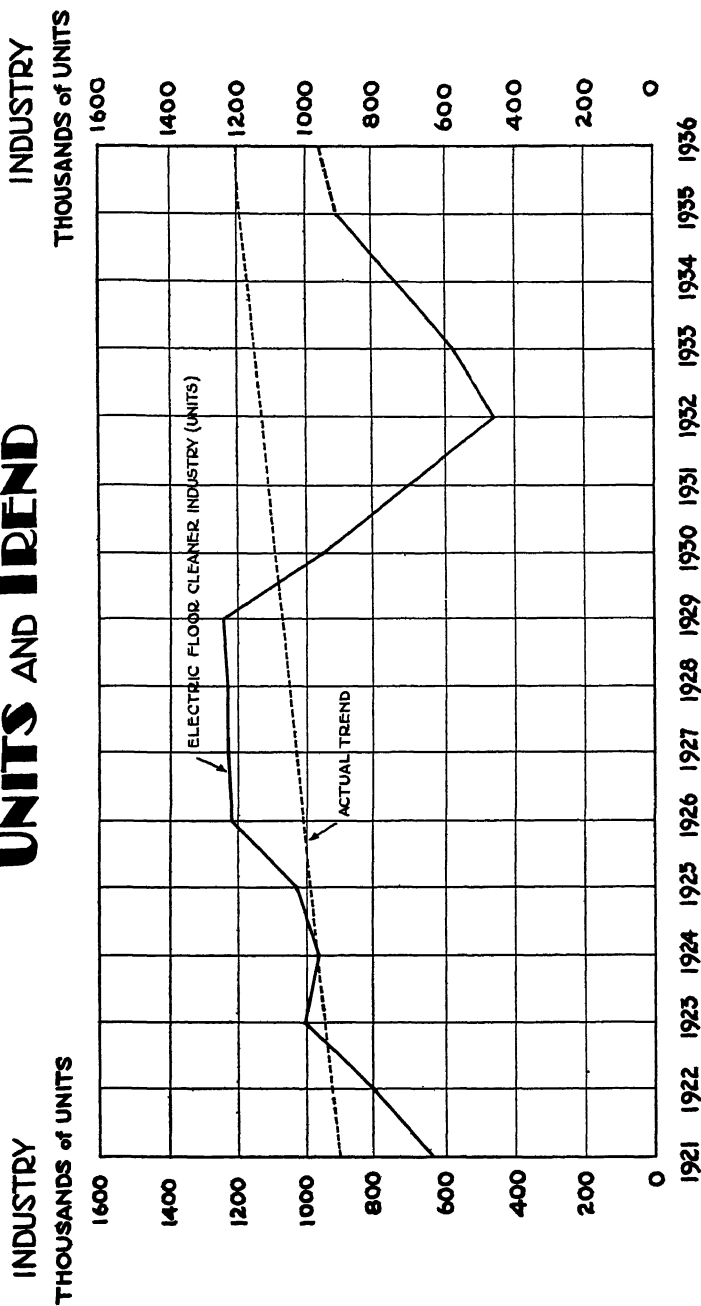
# FLOOR CLEANER INDUSTRY SALES (UNITS)

COMPARED WITH  
**GENERAL BUSINESS**  
IN DEVIATION FROM NORMAL



# FLOOR CLEANER INDUSTRY SALES

## UNITS AND TREND



cussion in the budget meetings, and, for the most part, has been the objective adopted.

On those occasions when a sales budget has been adopted in excess of that indicated by our regular percentage of the industry total, it has been supported by unusual sales promotion plans and, when necessary, by plans for the additional man-power required to attain the larger objective.

To obtain full advantage in the use of the product budgets for sales, there is one important ingredient we must build into them, and that is the ability to command the confidence of all who use them. We want everyone to feel that the objective is fair, and we are glad to have the opportunity to discuss the method of budget preparation with those who are interested.

One of our guiding principles is that the sales budget shall not represent an inflated figure. If the salesmen or the distributors have any basis for contending or believing that the figures were "plucked out of the air," the value of the budgets as sales control standards virtually disappears.

### *Budgets by Territories*

Total budgets for lines are broken down to distributors' territories by means of indices of purchasing power, with separate measures to evaluate the territory for each product line. The use of purchasing power indices for such budget breakdowns may be contrasted to other methods in popular use.

One of these methods is to base the budgets upon some percentage increase over past sales. Another is to secure field estimates of probable performance, and to use these estimates as the chief basis for the budgets. This latter method has the merit of reflecting current local conditions and, when adopted, is an incentive to the salesman or distributor, since it is the budget he set for himself.

### *The Purchasing Power Index*

Despite the real advantages in the use of such field estimates, we have used the purchasing power index as a basis for the distribution of our appliance budgets. The use of this basis involves some real problems, but thus far it has given us control advantages which substantially outweigh the disadvantages.

One of the serious problems in the use of budgets based on purchasing power indices occurs when the total budget for a line is very little in excess of the previous year's performance. Unquestionably,

some distributors will show a performance in the previous year substantially in excess of their current proportion of the national budget, which is indicated by the purchasing power index valuation of their territory.

This situation arises because the distribution by the index is a distribution of average performance—it assumes that each distributor should secure the same average percentage of business in his territory as is secured nationally by the Company. Thus a distributor who consistently secures a larger than average share of the market is underbudgeted when purchasing power indices are used.

The advantage which at the present state of our distribution picture has inclined us toward the use of purchasing power indices for distributor budgets is that they give us uniform standards upon which to measure performance. Strong and weak spots in our distribution setup are clearly revealed in this way, and steps can be confidently taken toward strengthening our distribution where that necessity is indicated.

We have also found that the lower budget as compared to performance for a good distributor is no lack of incentive for him, since he endeavors to exceed the previous year's performance, and is also pleased with the high rating given him in comparative performance with other distributors.

### *Adjusting the Basic Index*

Indices are sometimes questioned as standards of sales performance—they do not seem sufficiently related to the actual sales. To this the reply can well be made, that the actual sales of an individual company seldom give guidance as to the adequacy of the job being performed. The company may have its strength localized in sections of the country, in certain size towns, among particular classes of dealers. To use even its sales averages, as determined by correlations, may mean the perpetuation of a poorly balanced job.

An outside standard of measurement is needed. In most instances, the preferable standard is the industry volume of sales. When available, such figures are usually by states. In the chart on page 268 state sales percentages are shown for the washing machine industry. Note how erratic the sales are in an individual state from year to year. These sales figures are compared on the chart with the index we have established for this commodity, and with a basic index of purchasing power we have developed.

Several adjustments were necessary in our basic index to make it

*Comparison*  
**WASHING MACHINE INDUSTRY UNIT SALES - % U.S.**  
*and*  
**HOME LAUNDRY EQUIPMENT INDEX**

STATE	INDUSTRY SALES-%U.S.				FINAL HOME LAUNDRY EQUIPMENT INDEX	PURCHASING POWER BASIC INDEX
	1932	1933	1934	1935		
<i>Maine</i>	.35%	.54%	.78%	.68%	.66%	.62%
<i>Virginia</i>	1.19	.86	.91	1.00	.92	1.10
<i>Kansas</i>	1.21	1.69	1.70	1.77	1.40	1.27
<i>California</i>	6.45	7.25	6.84	7.66	7.90	7.46
<i>All others</i>	88.80	89.66	89.77	88.89	89.12	89.55
<i>Total</i>	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

fit the situation reflected by the state sales of the washing machine industry. We found through simple correlation charts that two factors were the major influences modifying the basic index, so that it agreed substantially with the washing machine industry state sales. These factors, which were related to washing machine sales, were home ownership and type of population.

### *Extending the Index to Counties and Cities*

The purpose of securing a close relationship between the sales figure and the index for states is to give confidence to the further extension of the index from the known quantity, states, to the unknown quantity, counties and cities. Careful study of the validity of this projection preceded the use of the index basis for these smaller territorial segments. In this study we were fortunate in having survey results available summarizing thousands of consumer interviews on washer ownership in a number of cities.

These city data secured from the surveys were correlated with the index computed for the same cities. This procedure gave us corroborative evidence that the attenuation of the state index into the cities would result in a valid standard.

### *Adjustment for Competitive Factor*

There is one factor we have injected into the purchasing power indices which, so far as I am aware, is unique with us, but should have an application to other electrical products. This modification of the purchasing power index we have termed the competitive factor. It was derived from studies which showed that an adjustment was necessary to allow for the difference in the intensity of competition prevailing in various size markets.

This factor is not intended to allow for difficulties of individual distributors, because such standards would tend to perpetuate unfavorable sales results. Instead, this competitive factor is based upon the premise that the large markets have a greater intensity of competition than the national average, and the small markets a lower intensity of competition.

### *Budgeting to Point of Sale*

Another difficulty with our consumer purchasing power indices which restricted their wholehearted acceptance and usefulness, was what is seemingly a minor point. The index measured the purchasing power of the residents of a community, rather than selling

capacity of the retail outlets. It was an index of point of use for our products, rather than point of sale.

The index previous to this adjustment threw too much of the budget into the suburban and rural areas. We have changed that condition. Now, the budget is distributed to the cities and towns.

In the studies preceding this change, we tested a number of procedures and found the following most valid. First, generally speaking, the purchasing power of consumers in a wholesale area was used as the base. Within the wholesale area, budgets were apportioned to the towns based on sales in two major retail classifications: (1) general merchandise stores, (2) furniture and household stores. These two classifications represent the important retail outlets for most of our appliances.

The purchasing power index adjusted for these shopping power factors represents a decided step forward. We recognize that even this index has its limitations. At some future time it is probable that we will attain greater perfection in our indices. In the meanwhile, the index and the sales budget based upon it are securing increasingly greater acceptance in the field.

A major budget control computed from these indices is a budget for each distributor's territory for individual product lines and by months. A second budget control consists of a product budget by towns.

### *Reports Showing Sales Performance*

Check on sales performance is available chiefly through two reports. One is issued monthly showing the distributor's purchases of individual commodity lines, for his territory as a whole. The other report is issued quarterly and shows distributors' sales of the commodity lines against budget by individual towns. We have recently expanded the town report to include about 2,000 towns, which provides a budget standard for approximately 80 per cent of our expected sales.

Perhaps because of its very simplicity, the effectiveness of the quarterly town report of sales, compared with budget, is considerable. It is the means of bringing into focus, spotty distribution results, obscured in a summary for the territory. By pressure upon the weaknesses indicated in the report, the entire distributive organization can be toned up to greater effectiveness. It helps produce a greater degree of balance in the sales of commodities, restricts advertising in accord with the potentialities of the towns, and affords the

# GENERAL ELECTRIC COMPANY APPLIANCE AND MERCHANDISE DEPARTMENT SUMMARY OF OPERATIONS APPLIANCE DISTRICT ORGANIZATION

PRODUCT I															Month Ended		APRIL 30, 1958	
DIST. NO.	THIS MONTH					YEAR TO DATE					% TO GROSS MARGIN							
	Sales Quota	Actual Sales	Actual %	Actual Expenses	% To Sales	Sales Quota	Actual Sales	P. %	EXPENSE		% TO SALES		% TO GROSS MARGIN					
									Budget	Actual	Budget	Actual	Budget	Actual				
1	18,080	6,400	49	616	94.6	57,540	43,180	75	2,061	2,587	3.6	5.5	10.7	53.5				
2	16,080	11,079	69	775	74.0	70,820	60,287	85	2,845	2,810	4.0	4.7	22.1	27.4				
3	8,695	18,284	210	448	2.5	37,455	45,816	122	1,904	1,495	5.1	3.3	27.9	19.2				
4	9,510	8,727	188	170	1.9	25,750	35,752	139	1,419	769	5.5	2.2	50.3	12.7				
5	21,950	29,050	132	1,121	5.9	95,410	101,493	106	5,564	4,647	5.8	4.6	35.0	26.9				
6	10,775	5,308	49	513	9.7	49,175	52,544	106	1,820	2,002	3.7	3.8	20.3	22.5				
7	7,701	8,531	110	178	2.1	34,841	40,276	115	2,088	1,132	6.0	2.8	32.9	16.5				
8	15,250	52,738	215	464	1.4	69,610	71,731	103	2,172	2,133	3.1	3.0	17.1	17.5				
9	32,720	29,635	91	1,458	4.8	150,100	141,022	94	5,944	4,807	4.0	3.4	21.8	20.1				
10	21,010	19,534	95	942	4.8	91,890	81,604	89	4,437	5,661	4.8	4.5	26.5	26.4				
11	9,250	20,546	220	622	3.1	38,870	46,882	121	2,653	2,303	6.8	4.9	37.5	28.9				
12	13,505	8,039	60	477	5.9	62,045	44,783	72	2,040	1,645	5.3	4.1	18.1	24.2				
13	8,853	6,613	77	370	5.4	40,138	37,408	94	1,817	1,307	4.5	4.0	23.7	27.4				
14	12,040	12,544	104	576	4.6	55,600	70,237	126	2,818	2,418	6.1	3.4	27.8	20.2				
15	19,700	13,544	69	956	6.9	90,180	80,297	89	3,145	4,151	3.5	5.2	19.2	30.4				
Total	216,059	250,998	107	9,646	4.2	969,439	933,317	93	42,704	53,045	4.4	4.0	24.2	23.5				

sales manager a valuable instrument for the control of his distributive efforts. The best testimony as to the value of the town budgets in sales direction and control is the constant extension of their use by distributors and by the individual sales sections.

In general, the sales budgets have aligned our sales efforts in proportion to the opportunities. There is no question in our minds but that the increased effectiveness and balanced operation resulting from their use has contributed materially toward improvement in distribution costs.

### *Reports on Salesmen's Performance*

Reports on our salesmen's performance includes both sales and expense. The chart on page 271 shows the operations of our appliance district sales organization. The left portion of the chart discloses the sales and expense performance for the current month; the right portion gives in more detail the operations for the year to date.

The "R%" column on this chart shows the sales budget realization. The cumulative realization of budget varies in the districts from 75 per cent to 139 per cent. Budgeted and actual expenses are shown in the next two columns. These expenses are related to sales and to gross margin. A point might be raised with regard to showing the salesman's performance against gross margin, especially since he does not have the opportunity to set the selling price. He can, however, place the emphasis on the most profitable items in the line, and thus should be judged not only by his volume but by the contribution of the volume to profit. In some reports it might even be desirable to go further and show the actual dollar contribution toward gross margin, since the percentage ratio alone is deceptive.

Performance, as reflected by this report, is supported by other detailed reports. Variation from budget standards on both sales and expense can thus be localized and resolved into its elements. As you know from experience with manufacturing costs, both favorable and unfavorable results may be analyzed to advantage.

### *Sales Expense Standards*

I have gone into the procedures we use to determine the sales budget, the standard for sales. We have also developed some procedures, although not nearly so elaborate, to determine the sales expense standards shown on the chart.

On the chart on page 273 is a simple analysis of "Traveling and Entertaining Expense." This is a controllable item of expense and

*Analysis of*  
**TRAVELING AND ENTERTAINING  
 EXPENSE**  
**DISTRICT FIELD ORGANIZATION**

DISTRICT	SQ. MILES <i>per</i> SALESMAN	TRAVELING & ENTERTAINING PER SALESMAN		
		<i>Annual</i>	<i>Monthly</i>	<i>% of Average</i>
1	63,515	\$ 2,082	\$ 174	108%
2	49,304	2,477	206	128
3	72,600	2,508	209	130
4	322,753	2,661	222	138
5	61,649	1,389	116	72
6	9,426	2,143	179	111
7	83,401	2,463	205	127
8	8,916	1,822	152	94
9	1,018	1,084	90	56
10	12,474	2,011	168	104
11	67,646	2,603	217	135
12	10,510	2,491	208	129
13	13,090	1,833	153	95
14	11,174	2,052	171	106
15	9,393	1,464	122	76
<i>Average</i>	34,578	\$ 1,926	\$ 161	100%

warrants close study. An adequate amount of traveling money should be appropriated, so that the salesmen can perform their function, yet restrictions must be imposed upon unwise expenditures which may occur through the thoroughly proper but misdirected efforts of the sales group.

The chart shows the average annual and monthly traveling expense per man. Perhaps the average is too high in itself, which would warrant investigation into the routing of the salesmen and the relationship of sales to expense by accounts and individual towns.

A further basis for standards is secured by the comparison of district operations among themselves. We thus find some relationship as would naturally be expected, in the square miles of territory to be covered by the salesmen and their traveling and entertaining expense.

We find that the salesmen in District 9 cover 1,000 miles of area on the average, the lowest in the group; and their expense for the item under review is also the lowest. Likewise, the area with the largest square miles per salesman is the most costly for this expense. In between these two extremes there is a rough relationship, and the use of this relationship, bolstered by other factors, has resulted in thousands of dollars being cut from the traveling and entertaining expense budgets.

The chart on page 275 shows a further analysis of controllable sales expense, other than "Traveling and Entertaining." "Telephone and Telegraph" runs to the extremes of 9 per cent to 277 per cent of the average for all districts. Such extremes are certainly the starting point for further investigation. Such investigations reveal those methods which make for the most economical distribution.

### *Expense Budgets*

Each expense classification was inspected in a similar manner, and in the composite they formed the district sales expense budget.

Expense budgets are also established for headquarters operation and are built up by each sales and service section. It cannot be said that these budgets represent scientific standards. Each section budget is, however, a subject of intensive committee discussion, and after being subjected to a gruelling ordeal it emerges as being fairly related to requirements.

I am doubtful that truly scientific standards can be set for these expenses. Comparisons of expense amounts or ratios among the sales sections are not particularly significant, because of the wide

*Analysis of*  
**CONTROLLABLE EXPENSE**  
*of*  
**DISTRICT FIELD ORGANIZATION**

DISTRICT	PERCENT <i>of</i> AVERAGE	
	<i>Telephone &amp; Telegraph</i>	<i>Total Controllable Expense</i>
1	47 %	80 %
2	91	61
3	26	44
4	9	31
5	140	128
6	63	92
7	51	74
8	115	106
9	277	194
10	189	210
11	70	68
12	101	79
13	82	73
14	79	114
15	158 %	145 %

differences in the industry distribution setup for the individual product lines.

Our budgeted expenses at this point are apportioned over our product lines. You are more familiar than I with the problems involved in the distribution of expense to the product. Those expenses that are not a direct charge to the sales sections are distributed on various bases such as volume of work performed for the sales section, the budgeted sales volume, or the man-power involved.

### *Budgeting Gross Margin*

At the time the expense budgets are computed, a budget is developed for the probable gross margin. The individual expense items are related to the gross margin, and a pre-determined profit is obtained. In some instances where the indicated profits are not satisfactory, it is necessary to review the expenses again and decide which expenses may be further reduced.

Control of these budgeted expenses and gross margin is exercised through a monthly profit and loss statement for individual products. These profit and loss reports are given close scrutiny by the management, and difficulties are followed up intensively. Responsibility for profitable operations is vested in management committees, and they are held strictly to account.

In my discussion I have explained somewhat sketchily the procedure we follow in controlling distribution and distribution costs. We have made some advance toward setting scientific standards for certain phases of operation; in other phases the use of standards is still in its embryonic stage. How far we may go in a practical way is still not certain.

In setting such standards for distribution in particular, one word of caution is necessary. The man in the field himself is not standardized, neither are the situations with which he is confronted. We must be careful in setting the standards, so that we do not unduly substitute remote control in place of the judgment of the man on the ground.

CHAIRMAN PACKARD: Thank you, Mr. Schoenfeldt.

Our final speaker this morning needs no introduction to our members, but for the benefit of our guests I am going to give you a brief, biographical sketch. He is a graduate of the University of Minnesota and the Harvard Graduate School of Business Administration, and he supplemented his academic training by serving as an

instructor in accounting at both of these institutions. He also was connected at one time with the Harvard Research Bureau.

His first business connection was with the Washburn-Crosby Company of Minneapolis, where he served in accounting and statistical capacities. Then followed several years as controller of a company engaged in retail food distribution.

Going to Washington in 1930 as a member of the staff of the Chamber of Commerce of the United States, he has devoted the past few years to a study of industrial problems, particularly as they are affected by legislative proposals before Congress. He is at the present time in charge of the National Chamber's activity in the field of domestic distribution. First President of the Washington chapter organized in 1932, he served as its President until 1934. He was elected a National Director in 1934 and has since served as National Director in charge of Research.

He is going to speak to us this morning on the subject of distribution in relation to competition. It gives me great pleasure at this time to turn the meeting over to our good friend, Art Gunnarson.

## DISTRIBUTION COST ACCOUNTING IN RELATION TO PROBLEMS OF COMPETITION

A. B. GUNNARSON

Chamber of Commerce of the United States,  
Washington, D. C.

**I**T is not my intention to discuss the technique or procedure which should characterize the proper determination of distribution costs. In the application of accepted accounting procedure to problems of distribution costs there has been ample demonstration by the two previous speakers that a thorough grounding in the fundamentals of cost finding procedure is an essential prerequisite for the ultimate formulation of practical and workable marketing plans. The long experience which accountants have had in dealing with cost finding for manufacturing operations furnishes a broad background for an approach to the intricate problems involved in determining distribution costs. The work already begun in this field as demonstrated by the applications discussed here today and by the ever-growing literature on the subject is bound to expand.

That accurate cost finding for all varieties of manufacturing and distribution operations will become an indispensable requirement is

apparent from a close study of the problems which are today perplexing business executives. In addition, cost accounting will increase in importance in the near future if certain trends discernible in legislative and administrative procedure in Washington and in the various states are at all indicative of the future. It is mainly to suggest some of the implications in these trends that I wish to draw your attention.

### *Cost Accounting in Relation to Legislative Developments*

Recent developments in Congress and in the activities of certain governmental agencies emphasize the increasing importance which cost accounting will play in future operations of business and in relations between government and industry. Accountants must understand the significance of these trends if they are to serve their employers or clients effectively.

Most of you remember N.R.A. and the attempts made from June 1933 to May 1935 to prescribe accounting procedure and cost formulas for a large number of industries and trades. In its endeavors to lay down accounting policies and to connect such policies with pricing practices, N.R.A. violated fundamental economic and accounting principles. Accounting procedure was circumscribed by legal terminology with the result that the flexibility so desirable and necessary for the day-to-day operations of business was largely lost. The direct connecting of accounting procedure with minimum price formulas, with prohibitions against selling below cost, and with price control devices was most unfortunate. The impetus which N.R.A. could have given to promoting better cost-finding methods among the industries and trades seeking codes was largely lost in a welter of confusion. Many of these industries and trades became so discouraged in their efforts to stimulate further interest in proper accounting on the part of their members that years will elapse before serious attention to these problems can be expected on the part of some industries.

Demise of N.R.A. did not bring to an end other evidences of interest of public authorities in the accounting practices of business firms. Such interest on the part of the Bureau of Internal Revenue and of the Securities and Exchange Commission are sufficiently well known to require no comment here. The Interstate Commerce Commission and regulatory bodies of the states have long had the accounting practices of railroads and public utilities under scrutiny. More recently the Vinson Act, pertaining to naval construction, and the now invalidated Guffey Act relating to the bituminous coal industry

raised fundamental questions as to the nature and extent of conformance of corporate accounting practices with provisions laid down by federal statutes or regulations. In the offing looms the Social Security Act with its requirements as to records which employers must keep.

### *Price Discrimination Under the Clayton Act*

In order to lay the background for the next development which it is desirable to discuss, it seems proper to begin with a reference to the Clayton Act, approved on October 15, 1914. Among other things, Section 2 of the Clayton Act\* prohibits discrimination in prices where the granting of such discriminations may have the effect "substantially to lessen competition or tend to create a monopoly." There is a proviso, however, to the effect that discriminations in price are permitted if price differentials reflect differences in costs due to variations in selling expense and transportation charges. Further, price discriminations may be justified on account of differences in quantity and quality of products sold, or when made in good faith to meet competition.

### *Price Differentials Related to Cost Differences*

It is to be noted that the law recognizes a relationship between prices and costs to the extent that price discriminations, whether they are in the form of net prices, or discounts and allowances, are permitted when justified by differences in selling and transportation costs. For legal interpretations of the Act relating to this point, it is, of course, necessary to refer to decisions of the courts. Unfortunately for the purposes of this discussion, however, few cases involving this question have arisen.

#### \* Clayton Act, Section 2:

"That it shall be unlawful for any person engaged in commerce, in the course of such commerce, either directly or indirectly to discriminate in price between different purchasers of commodities, which commodities are sold for use, consumption, or resale within the United States or any Territory thereof or the District of Columbia or any insular possession or other place under the jurisdiction of the United States, where the effect of such discrimination may be to substantially lessen competition or tend to create a monopoly in any line of commerce: *Provided*, That nothing herein contained shall prevent discrimination in price between purchasers of commodities on account of differences in the grade, quality, or quantity of the commodity sold, or that makes only due allowance for difference in the cost of selling or transportation, or discrimination in price in the same or different communities made in good faith to meet competition: *And provided further*, That nothing herein contained shall prevent persons engaged in selling goods, wares, or merchandise in commerce from selecting their own customers in bona fide transactions and not in restraint of trade."

In 1924 several bakery products manufacturers were charged by the Federal Trade Commission with violating Section 2 of the Clayton Act by granting quantity discounts to chain stores based on the combined purchases of all the stores in the chain while not extending this privilege to individual grocers who might wish to continue their orders of bakery products. The manufacturers had adopted, publicly announced and adhered to, definite quantity discount schedules applicable to all customers.

When the case was brought before a United States Circuit Court of Appeals, the court said that the practice of giving discounts is permitted under Section 2 and even went so far as to say "it may be that the cost of selling the chain is the same as the cost of selling to the owner of but one store; but that does not sustain the charge of price discrimination for there is no provision in the Clayton Act, or elsewhere, that the price to two different purchasers must be the same if it cost the seller as much to sell one as it does to the other." (National Biscuit Co. v. Federal Trade Commission, 299 Fed. 733.) Although the United States Supreme Court five years later rejected the decision in this case as having been based on unsound premises, the higher court's decision did not touch upon the matter as to relationships between prices and costs in determining price discriminations. During this interim period, however, the Federal Trade Commission had had no substantial basis on which to bring actions involving price discrimination.

### *Selling Below Cost*

Another case throws several interesting sidelights on the point of view of the courts respecting price discrimination. A manufacturer of spark plugs had over a series of years developed his product to the point where it was used almost exclusively as original equipment for Ford automobiles. To develop this market and in anticipation of the extensive replacement market which would later develop, the spark plug manufacturer sold his product to the Ford Company at less than factory cost. Prices on the spark plugs going into the replacement market exceeded the prices charged the automobile manufacturer. Over a four-year period, the loss from the sales made at less than cost plus the expense of advertising for promoting replacement sales exceeded \$1,000,000. At the end of this period replacement sales had reached the volume of the factory equipment sales.

In the meantime another spark plug manufacturer had come into

the market. Through allegations respecting patents and trade marks, the second manufacturer was brought into court by the first, and in the ensuing litigation the second contended that the first, through his sales of spark plugs at less than cost had himself violated Section 2 of the Clayton Act. As to this question, the court said "that Act—rightly interpreted—forbids discrimination in price between purchasers only where the effect may be unreasonably to lessen competition or tend to create a monopoly. . . . The price of the car to the original purchasers is presumably lessened by the low prices paid for factory equipment. The replacement price is not necessarily thereby increased above the normal from the mere fact that the loss incurred in providing factory equipment must be overcome by replacement prices. . . . No doubt the immense quantities of plugs which (the first manufacturer) has been able to supply as factory equipment has enabled (him) to manufacture and market at much less cost than (he) otherwise could. The furnishing of factory equipment at less than cost seems to present a not unfair analogy to cost of advertising." (*S. S. Kresge Co. v. Champion Spark Plug Co.*, 3 F. (2d) 415.)

The two decisions referred to are not especially helpful in clarifying the meaning of Section 2 of the Clayton Act, but they furnish some clues as to the nature of questions which are bound to arise under any statute which deals with such elusive matters as prices. For other clues it seems advisable to examine further the experience of the Federal Trade Commission,—the agency in which is vested the authority to enforce compliance with Section 2 of the Clayton Act and to deal with questions of unfair competition in interstate commerce.

### *Large-scale Distribution*

On May 5, 1928, the Senate of the United States passed a resolution (Senate Res. 224, 70th Congress, 1st session) directing the Federal Trade Commission to make an exhaustive study of chain-store methods of distribution. Some members of Congress were gravely concerned about the possibilities of developing monopolies in this field of business through utilization of unfair methods of competition. In the resolution the Senate asked for information as to how far the growth of this form of distribution was based upon savings in cost of management and operation and how far upon quantity prices which were available only to chain-store distributors.

For six years the Commission's inquiry continued. On December

14, 1934, the last of some 25 reports was filed with the Senate. In this report the Commission reiterates the generally accepted point of view that price discriminations are not unlawful under Section 2 of the Clayton Act notwithstanding the fact that the effect "may be to substantially lessen competition or tend to create a monopoly" if such discriminations fall under the three provisos of this section previously discussed, *i.e.*, if the discrimination is "on account of differences in grade, quality, or quantity," or makes "only due allowance for difference in the cost of selling or transportation," or is "made in good faith to meet competition."

The Commission's report then goes on to say, "the question remain whether the discrimination is 'on account of' differences in grade, quality, or quantity, or makes 'only due allowance' for difference in cost of selling or transportation. Quantity and cost of selling are the only factors among these which give trouble in considering the legal status of discrimination in favor of chain stores. Cost of selling is generally in inverse ratio to the quantity sold to a given customer. This means that both quantity and cost of selling tend to support a lower price to chains than to small competitors of the chains. If the section be taken to mean that any difference in quantity justifies any amount of discrimination, it is obvious that the section may be readily evaded and gives no substantial protection against the evil denounced. If it be taken to mean that the discrimination must make 'only due allowance' for difference in quantity, it involves a preliminary decision that a given discrimination does not make 'due allowance' in quantity before a proceeding under the section can be justified on practical grounds."

When it came to making recommendations for amendatory legislation which would remedy the difficulties mentioned by the Commission, it brought forth no specific suggestion, but again referred to the difficulties of interpretation and enforcement growing out of the provisos regarding quantity, cost of selling, and meeting competition. Instead, the Commission had already moved in another direction, when on September 13, 1933 it had entered complaint against a large tire manufacturer charging the manufacturer with giving substantial price concessions to one large customer with the result that other customers were unfairly discriminated against.

A formal cease and desist order was issued by the Commission on March 6, 1936, and through an appeal taken by the manufacturer it may be expected that the courts will decide the extent of the Commission's authority in dealing with discriminatory price practices.

*Quantity Discounts and Cost Differentials*

To this audience, the merits of the case may have no interest, but as the cease and desist order lays down some rules for accounting, and sets forth certain standards as to the relationship between costs and discounts, it may be considered as a prominent signpost pointing the direction of current developments in the field.

The Commission contends that "the difference in price (as between the one large buyer and other customers) shown in this case far exceeds any demonstrated difference in savings and bears no reasonable relation to the difference in cost." The Commission also makes the following statements:

The practice of giving large and powerful purchasers a disproportionately large discount is not justified. Such a discrimination, when made merely on account of size tends toward monopoly and the suppression of competition. If the quantity proviso be interpreted to mean that a manufacturer can discriminate with respect to quantity sales to any extent he desires, the section would be rendered meaningless and ineffective. It is clear that the quantity proviso can only have been intended to preserve to the large buyer the inherent economies of large purchases and does not give a manufacturer a license to grant him a favored price without restraint. . . .

In arriving at a price on account of quantity sold, some standard of comparison is necessary. It is the relation between price and quantity. . . . Quantity sales are cheaper than small ones and to this extent they are economically justifiable. A quantity discount based on the amount of annual sales is a price discrimination contrary to Section 2 of the Clayton Act unless it can be shown that it represents and fairly approximates lower costs. On the one hand, remote and unsubstantial differences in cost may be disregarded, and on the other hand, a discount is not to be condemned merely because it does not mathematically accord with cost differences. . . .

A manufacturer, under the Clayton Act, is under a duty to comply with the law, and he may not make his bargains according to his own interest by discriminating as he pleases, however honest and however justifiable such course might be from the standpoint of commercial principles. . . . While a manufacturer has an interest in making attractive offers, in order to secure as much business as possible, it is, however, an interest which can only be consulted and acted upon in subordination to law. When one discriminates in price between competitors he reduces the price to one or some of them. Competition limits the selling price. When a competitor is given a lower price it follows that his profit has been increased by just the amount of the reduction.

So much for the Commission's interpretation of those provisions of Section 2 relating to quantity prices. This interpretation the Commission then applies in its cease and desist order restraining the manufacturer from discriminating in price, except insofar as due allowance is made for differences in cost of transportation and selling, as between the one large customer and all others.

*The Sugar Institute Case*

Following by less than a month the issuance by the Federal Trade Commission of its cease and desist order against the manufacturer came the decision, on March 30, 1936, of the United States Supreme Court in the Sugar Institute case. Among other things, members of the Sugar Institute had agreed to eliminate all quantity discounts. This action had been taken presumably for the purpose of stamping out the practice of giving "unsystematic and secret quantity discounts." But members of the Institute had also agreed to prohibit discounts which were "systematically graded according to quantity." The practice was condemned by the Court which pointed out that selling sugar in quantities often resulted in substantial economies, and that by agreeing to prohibit quantity discounts, the seller was precluded from passing these savings on to the buyer. The Court upheld a decree enjoining members of the Institute by joint action from "preventing, restraining, or refusing to grant quantity or other discounts where such discounts reflect, effect, or result in economies to refiners either in direct or indirect costs."

As a practical matter, this decision does not compel a manufacturer to differentiate in price between a purchaser buying a small quantity and one buying a large quantity. But it does seem to indicate that members of an industry may not agree to eliminate all quantity differentials, particularly where sales in quantities can be made at a saving in cost.

*Allocation of Costs of Manufacture to Different Orders*

A further significant development growing out of the Federal Trade Commission's cease and desist order in the case of the tire manufacturer should be noted. In addition to ordering the manufacturer to discontinue price discriminations, the Commission prescribes a general method of accounting to be followed by the manufacturer for determining the total cost of tires produced. He is told, in effect, that any savings resulting from producing tires in large quantities due to orders received from one large customer must be spread over all orders and not allocated to the order of one customer. According to the Commission's ruling, the only variations in costs which may be taken into account in pricing tires as between different classes of customers are those which arise on account of differences in selling and advertising.

*Further Legislation on Price Discrimination*

The next important development relating to price discrimination was brought to a focus through the introduction of a number of bills in the Congress which has recently adjourned. These bills went through a series of hearings in both Houses and following passage of different bills in the Senate and House agreement was finally reached. The compromise bill was passed, and then approved by the President on June 19. This Act is commonly known as the Robinson-Patman Act and amends Section 2 of the Clayton Act. The original proviso in Section 2 which permits differentials which make due allowances for differences in costs of selling and transportation is extended to include differences in cost of manufacture. The broadening of this provision would seem to increase the difficulties of determining justifiable price differentials.

Another portion of the Robinson-Patman bill makes it "unlawful for any person . . . to sell . . . goods at unreasonably low prices for the purpose of destroying competition or eliminating a competitor." It may be recalled that reference was made earlier to the opinion of the court that a manufacturer who sold his spark plugs at below cost was not violating Section 2 of the Clayton Act. Further, the experience of N.R.A. in attempting to administer minimum price provisions of codes,—with their multitudinous, and in most instances vague, definitions of "lowest reasonable cost," "average cost," and "individual cost,"—should be indicative of the difficulties facing the Federal Trade Commission and the courts in the event this provision of the bill is brought to a test.

One of the most important new duties assigned to the Federal Trade Commission is that the Commission "may, after due investigation and hearing to all interested parties, fix and establish quantity limits—where it finds that available purchasers in greater quantities are so few as to render differentials on account thereof unjustly discriminatory or promotive of monopoly in any line of commerce."

*Administrative Problems Ahead*

It should be apparent from the discussion which has preceded that we have now arrived at a point where a government agency may have the authority to determine maximum limits as to quantity discounts which may be offered under certain circumstances. It should be recalled also in this connection that in the case of the tire manufacturer to which reference has been made the Commission has

undertaken to prescribe the methods of accounting to be used in ascertaining differences in cost which are to control price differentials.

Where the road leads from here remains to be seen. The Robinson-Patman Act is more complicated than Section 2 of the Clayton Act and we have already seen the difficulties which the courts and the Federal Trade Commission have faced in attempting to apply this law to business situations as they have arisen.

### *Problems Facing Business*

If the new law can be enforced there are a number of questions which seem pertinent and which you, as accountants, should keep before you as you return to your own tasks. Without in any way attempting to indicate policies which should be followed, let me leave with you the following questions:

If you are a manufacturer who has followed a policy of giving advertising allowances, are you certain that you are receiving benefits commensurate with the expenditures made?

If you are a distributor who has been accepting advertising allowances, are you certain that the allowances received compensate you for advertising expenditures made in behalf of the manufacturer's product, as well as for the time consumed by your sales force in promoting the sale of such products to customers?

If you are a large distributor who has been receiving price differentials as a consequence of your ability to distribute large quantities of a product, would it be more advantageous to manufacture your requirements if the advantages of price differentials were to be removed? (A news item in the *New York Times* of a few days ago reported that one large manufacturer selling to chain store organizations had announced his intention of confining future sales to five such firms. Twenty salesmen now calling on retailers would be dispensed with. On the other hand, some chain store organizations are reported to be seriously considering extending their activities into the manufacturing field. If these developments materialize, it would seem that the margins between chain organizations and individual retailers,—the alleged wide spread of which has been complained of,—would be extended further rather than become narrower.)

What are the possibilities of setting up separate corporations to manufacture for and sell to large-scale buyers?

What effect will this bill have upon the future development of private brands as compared with nationally-advertised brands? Will it be necessary for manufacturers to increase sales promotion efforts on the latter so as to make it necessary for mass distributors to carry such brands and thereby counteract the inroads which private brands may make?

Will there be additional evidences of reciprocal buying arrangements?

If you are now selling to a relatively few large buyers as well as to a substantial number of small buyers, and if you are offering to the few large customers price differentials which may not be permitted under the new legislation, would it be a good policy to restrict your selling to one class of customer? If so, which class?

As I said in the beginning, it was not my intention to discuss any of the technical problems relating to the determination of distribution costs. By calling to your attention some of the developments which have been slowly gathering momentum during recent years, I hope I have stimulated your thinking toward considering certain basic problems not only with respect to accounting but also with respect to relations between government and business. As the years pass there will undoubtedly be opportunity to discuss these problems again and to indicate the success with which laws such as the Robinson-Patman Act are operating. As business organizations proceed to comply with the provisions of the new law, it would seem that increasing attention must be given to the determination of costs.

There can be no denying the fact that accountants will be called upon to help solve a number of perplexing business problems. More than ever before, they will find it necessary to have a thorough understanding of existing technique for the determination of costs, and they must meet the challenge of extending such technique to the solving of the intricate problems of management which will arise as a consequence of such legislative and economic circumstances as have been discussed.

CHAIRMAN PACKARD: Thank you, Mr. Gunnarson. Because of our time limitations, I am going to refrain from making any remarks on Mr. Gunnarson's excellent address.

And now, if Mr. Nielsen and Mr. Schoenfeldt will return to the platform, we will have a few minutes before lunch for discussion, and if that is not sufficient, we will reserve a little time this afternoon. Are there any questions?

C. H. TOWNS (*Partner, Loomis, Suffern & Fernald, New York, N. Y.*): Mr. Nielsen, as I remember it, referred to the results of consumer analysis saying that, for purposes of merchandising control and the planning of merchandise policies, a company might put its factory records in the safe.

Now I can see that that may be true, but I should be interested in knowing whether Mr. Nielsen has any comment to make as to the value of the results of the consumer surveys for purposes of financial budgets.

It seems to me that a factory would necessarily have to get out its factory records from the safe for purposes of making monthly budgets, and I should be interested in any comments that Mr. Nielsen

could make as to the relation of those two; that is, the factory records and the consumer sales records for purposes of making the company's financial budgets.

MR. NIELSEN: As I understand it, the question is whether or not the consumer sales figures can be used to set up future budgets and predict what you are going to sell in the next year.

MR. TOWNS: From the factory viewpoint.

MR. NIELSEN: Yes. I probably should confess that I did not mean literally that you should put all the records in the safe. I mean that in trying to determine the result of your last deal to the trade, it is frequently found that your own sales records just aren't of any value for that particular purpose.

In trying to set up your budget for next year, if you were a tooth paste manufacturer, for example, it would be tremendously important for you to have the latest available information on the trend of tooth paste versus tooth powder. If the trend toward powders is currently, right at this instant, going against you, and you are facing a decline of 30 per cent, you want to know that right now when you are setting up the budget.

If the trend had been going that way for four or five months, it might not have affected your sales records; but if you have the latest up-to-date information from the consumers, that would be a useful fact in setting up your budgets.

The same is true of trends toward or away from your brand. Those are important and can be determined from the consumer angle. The same would be true of trends by the city sizes. If you have a product that is sold largely in small towns, or if your brand has a particularly strong competitive position in small towns, and if an index of the sort I have described shows that the small towns are gaining, or that the sales of your class of product are gaining rapidly in small towns in the last few months, that would certainly be a factor to be set up in your budget.

In brief, I do not know of any clients who do not use those figures as a guide in setting up budgets. In some cases they are even used as a guide in buying raw materials, because they know four or five months earlier what the demands are likely to be.

B. W. SHREDER (*Accountant, Sidney Wanzer & Sons, Inc., Chicago, Ill.*): Mr. Nielsen in his presentation has shown a com-

parison of one product with others, analyzing also by cities. I have a problem where in preparing a budget our sales are limited within one area. We sell direct to the consumer, so we are dealing with consumer sales. I would like to know what method Mr. Nielsen would recommend as a yardstick by which we may determine how to budget our next year's distribution.

MR. NIELSEN: That is a very important question, but it is a type I feel rather inclined to duck, because I do not know your line of business or the methods used by competitors as to the channels of distribution in which they are selling.

We have a standardized method of doing these things in the food and drug and department store industries, but if it came to setting up a method for the sale of liquor or hosiery or any other object, it would require a tremendous amount of study before we could do that. Maybe I do not understand your question.

MR. SHREDER: I think I can make it much clearer by stating the business. It is the milk business. You are familiar with the milk business. It is usually limited; that is, the smaller milk dealer is limited to a city. It is difficult to find out the total volume or potential sales in that territory, and I wonder if the population would be a factor.

MR. NIELSEN: As it happens, we have just completed a survey for the Milk Institute, where one of the problems is to find out the effect of the withdrawal of relief tickets or coupons which have been given to the relief clients in the City of Chicago and the substitution of cash, whether they could spend the cash for anything they wanted to or spend the coupons for milk, and they were trying to find out whether cash was being now used for purposes other than the purchase of milk, and whether children were suffering as a result.

That sort of information was obtained on a house-to-house basis, getting the purchases of each family before and after the change. I assume that the same process would have to be used in your case, calling on a certain percentage of the families in that town and discussing their milk consumption with them. It is a practicable method, and it does not take as many calls as you would think. I believe we made a couple of thousand calls in the City of Chicago to get a cross section.

CHAIRMAN PACKARD: Are there any more questions? I hate to close the meeting with so few questions, but the time is getting rather short and we will close now to reconvene at two o'clock. We have a rather short and snappy program arranged for this afternoon, and as I indicated before, if any other questions occur to you with reference to this morning's session, we will try to take care of them at that time.

. . . The meeting recessed at twelve thirty-five o'clock . . .

SESSION VI  
OPEN FORUM DISCUSSION  
THURSDAY AFTERNOON, JUNE 25, 1936

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C. A. PACKARD, *Chairman*

CHARLES W. TUCKER is Controller and a member of the Board of Executives of H. P. Hood & Sons, Inc., dairy experts, with headquarters in Boston and plants and branches located throughout the New England states. He is a graduate of the Bentley School of Accounting and Finance, in Boston, and is a C. P. A. of the State of Massachusetts. He is active in the affairs of the trade associations of his industry, being Secretary of the Controllers' Council of the International Association of Milk Dealers, a director of the Controllers' Council of the International Association of Ice Cream Manufacturers, and has served as a member of the Accounting Advisory Committees of both associations. During his business career he has occupied various positions with organizations engaged in the manufacture and distribution of underwear, lighting fixtures, and dairy products, and with others engaged in public accounting, real estate development, and charitable and religious undertakings. Mr. Tucker has been a member of the N. A. C. A. since 1920, and has served Boston Chapter as Director of Publications, Vice President, and President.

HOWARD E. COOPER is a graduate of the University of Denver, having received the degree Bachelor of Commercial Science in 1923 and the degree of Bachelor of Science in 1925. He received the degree of Master of Science from Columbia University in 1927, and the degree Doctor of Philosophy from the Johns Hopkins University in 1932. Mr. Cooper was employed with the Military Intelligence Division of the War Department, Washington, D. C., during 1918. He was Associate Director of Education, Denver Y. M. C. A. Schools, 1919-1922; Registrar, School of Commerce, Accounts and Finance, University of Denver, 1922-1928 (on leave 1926-1927); Assistant in Accounting, Columbia University, 1926-1927; Research Assistant in Banking, Columbia University, Summer of 1927; Associate Professor of Banking, University of Denver, 1927-1928; appointed Instructor in Accounting, the Johns Hopkins University, 1928. He carried on special research work at the Black and Decker Manufacturing Company, in the Summer of 1930. Mr. Cooper was a Director of the Baltimore Chapter, 1929-1930 and 1932-1933. He served as President of the Baltimore Chapter for the year 1933-1934.

E. A. GREEN was graduated from Pennsylvania State College in 1918. Following his graduation he enlisted with the 20th Engineers and saw seventeen months' service overseas. In 1919 Mr. Green was engaged by the Reading Iron Company to do production work, but left the position in 1922 to become paymaster and cost accountant for the Temple Malleable Iron and Steel Company, Temple, Pa. In 1924 he became head of the cost department of William H. Luden, Inc., where he remained until, in 1928, he entered the employ of E. Richard Meinig Company as office manager. In 1929 Mr. Green became associated with his present employers, Armstrong Cork Co., Lancaster, Pa., serving successively in the capacities of assistant cost accountant, chief cost accountant, chief accountant, and chief accountant and auditor. Mr. Green has served on Reading Chapter in many capacities, including the presidency which he held in 1932-1933.

## OPEN FORUM DISCUSSION

CHAIRMAN PACKARD: Our first subject for this afternoon will be "What Is Required for Internal Audit Control?" Our speaker has been a member of the National Association of Cost Accountants since 1920. He is a Past President of the Boston Chapter, and really needs no introduction to our members.

He is Controller and a member of the Board of Executives of H. P. Hood and Sons, Incorporated, dairy experts. He has been very active in the affairs of the trade associations of his industry, being Secretary of the Controllers Council of the International Association of Milk Dealers, a Director of the Controllers Council of the International Association of Ice Cream Manufacturers, and has served as a member of the accounting advisory committees of both associations.

However, his business activities have not been confined to dairy products, and he comes to us with a well rounded experience which well qualifies him to present this subject. I take pleasure in calling upon Mr. Charles W. Tucker.

### WHAT IS REQUIRED FOR INTERNAL AUDIT CONTROL?

CHARLES W. TUCKER

Controller, H. P. Hood & Sons, Inc.,  
Boston, Mass.

AS the result of considering from many angles the connotations of the words, "What Is Required for Internal Audit Control?" I am somewhat overwhelmed by the magnitude of the subject. When I attempt to visualize the implications of the *last* three words, "Internal Audit Control," I feel very humble indeed, as I begin my attempt to furnish some of the ideas which might reasonably be expected in a paper planned to meet the demands of the *first* three words, "What Is Required," which loom up with such neon-like insistence.

If I am to use my time and yours to best advantage, it is imperative, in discharging this assignment, that I preserve a semblance of that equilibrium which is so indispensable to the success of any undertaking. In order even to scratch the surface of this subject, I shall

be obliged to omit most of the step-by-step details of auditing and internal check with which I assume you are all more or less familiar.

I propose to outline my conception of some of the more important features which, if prudently administered, will go a long way towards establishing and maintaining an effective system of internal audit control. A system such as that which I have in mind does not consist primarily of checking for the purpose of discovering irregularities, but is inextricably woven into the fabric of a program of cost reduction and control, and has for its underlying purpose the prevention of losses.

In my endeavors to find an idea for a suitable beginning for this exposition, I recalled certain significant words in the opening paragraph of a memorandum outlining the functions and responsibilities of a controller, to which I had occasion to give my attention a number of years ago. These words which, despite their simple directness, offer such a challenge to ingenuity, are to the effect that the controller is responsible for connecting each step from the point where the company's cash is paid out on proper authority, to the point where the company receives cash for merchandise delivered, and for reporting any shrinkages or losses in between.

If one were to write a really worthwhile book on this subject, I suspect he would cover pretty completely the whole field of what is required of a modern controller's department in a large and successful corporation. I suspect, also, that if the author had had the benefit of sufficient exposure to the many and varied problems falling within the general field of internal audit control, he would deal with a number of matters of a general management nature.

With the great game of business being played on such a huge scale, involving the handling of such tremendously large numbers of transactions, in many cases through the medium of numerous manufacturing and distributing units in the same company, it is simply appalling to find so many of our American business men persisting in their time-honored aversion to what they regard as "red tape," with the result that efforts to keep essential records and systems setting forth individual accountabilities are in many cases almost completely thwarted.

The desire for an orderly and smooth-running business is quite natural; but we must recognize that human nature being what it is, steps must be taken to insure the compounding of the proper combinations of precautionary ingredients, so that management may be

informed of the condition of the business with such timeliness as will enable effective remedies to be applied before it is too late.

We cannot, of course, change human nature in business simply by rules and regulations and "systems," any more effectively than we have been able to do with respect to certain great moral issues regarding which our law-making bodies have legislated from time to time. There is little doubt in my mind, however, that an adequate system of internal audit control will go a long way toward keeping an entire organization "on its toes," with the result that errors will be kept down to a pardonable minimum and a satisfactory control will be maintained over the assets and expenses of the company, in addition to providing a most effective deterrent to potential embezzlers.

In all too many cases, the employer has been at least equally at fault with the trusted employee who has yielded to the lure of what looked like easy money, and has been guilty of at least "contributory negligence" in failing to install reasonable safeguards which, if provided, would have done much to keep the unfortunate one from slipping.

When giving consideration to such matters, we are, of course, always confronted with the very real problem of cost. Not the least of our difficulties is that of balancing the value of the system of control provided against the cost of bringing it about.

To return again to my main theme: In my opinion, an adequate system of internal audit control exists in an organization only when there has been evolved the right combination of many factors which are all more or less interdependent. These factors are as follows: (1) Organization; (2) Personnel; (3) Policies and Procedures; (4) Records; and (5) Mechanical and Other Equipment Aids.

### *Organization*

Fred W. Shibley once made the statement that "the way to control, is to control." If real control is to be accomplished, however, the channels through which it can function effectively must be provided. Where the management has the right point of view with regard to the whole problem of control, you will find a controller with a will of his own, who, in order that he may maintain an independent point of view, is responsible to none other than the chief executive officer or the board of management itself. It would seem unnecessary to engage in a dissertation of any length on the desirability of establishing and maintaining such a condition of affairs. Suffice it to say that internal

auditing is more effective when there is a definite understanding of such a relationship to the rest of the organization

The internal auditor should be responsible to the controller, and should engage in a scheme of work which should complement, not conflict with, that of the company's external auditors. He should be one who is well versed in the operating essentials of the business and should have the ability to "read between the lines," so as to detect readily any deviations from, or weaknesses in, the established system of control.

In working out the scheme of organization, it should be borne in mind that wherever possible, accounting and record-keeping functions should be kept separate from those of operating, and that certain functions, of either an operating or an accounting nature, should be divided in such a manner that one employee may be checking another from the standpoints of accuracy and honesty.

### *Personnel*

An organization is frequently "but the lengthened shadow of a man." Although such a statement smacks of triteness, many outstanding examples of its truth may be observed among our contemporaries.

Wherever we find an outstanding, able chief executive, we usually find associated with him a well-selected group of key men, whose efficiency is increased by the fact that their thought processes for the most part are synchronized with those of the one to whom they look for their example. In a company with such a top layer of executives, internal audit control can be made to yield results which will leave in the mind of the thoughtful observer no doubt of its value.

The extent to which any system can be made to function satisfactorily depends largely on the type of individuals who operate it. The human element is so unmistakably the backbone of the organization that it would be the utmost folly not to recognize the fact that the personnel problem is probably the most important with which we have to deal.

If it were possible, through the medium of a dependable sixth sense, to hire only honest employees, there would be little to worry about so far as trustworthiness is concerned. Experience has proven, however, that occasional errors of judgment are unavoidable, and also that time has a way of changing an individual's ethical as well as his physical characteristics. And in giving consideration to such matters

as character and trustworthiness, we should not overlook that very important qualification, the ability to keep confidences.

In spite of errors of judgment and the effect of time, it stands to reason that where well-tried and proven methods of personnel selection and follow-up are in operation, a more dependable organization will exist than could be the case if these important matters were handled in an indifferent and slipshod manner.

The job is not finished, however, when a man is hired. Someone should check occasionally on his living conditions and personal habits, and proper consideration should be given to any changes as indicated by evidences of extravagant living, bad associations, or other signs of "stepping out of line."

The use of surety bonds, rotation of employees on jobs, and insistence that every employee take an annual vacation, all have their good points.

A policy which forbids the employment of relatives in the same department is also worthy of careful consideration.

Provision of opportunity for employees to acquire a stake in the business through stock ownership almost invariably results in an appreciable strengthening of internal audit control.

The controller's supervisory and auditing staffs should be composed of persons who are unusually alert and capable of coping with changing business conditions, and of devising and initiating procedures for "keeping up with the times." Some should be recruited from other industries and from the public accounting profession in order to obtain the advantages of fresh and varying viewpoints.

Although I hesitate to attempt a lengthy description of the ideal controller, nevertheless I should like to leave the thought that he should not only be well versed in the technical aspects of accounting and auditing, a most essential qualification, of course, but he should be one who is capable of stepping out of the field of debits and credits and of exercising a general management point of view which will preclude his ever giving the impression that the business should revolve around accounting, but which, on the contrary, will enable him to conduct the affairs of his office so as best to meet the requirements of the business.

Before concluding these remarks on personnel, I bespeak your thoughtful consideration of a point which may seem somewhat far-fetched for inclusion in a paper of this kind: In the matter of personnel selection, it would be interesting to know how many actually

take steps, beyond one or two tactful questions, to determine the exact state of health and physical soundness of applicants.

### *Policies and Procedures*

It is gratifying to note a growing tendency to shape accounts so as to set forth the manner in which individual responsibilities are being discharged. Where such plans are in operation, uncertainty as to what is expected of one, and the resulting tendency to "pass the buck," seem to be reduced to a negligible quantity.

In the operation of any system of accounts, it is important, of course, that competent accounting ability be on the job to properly shape the course of all entries at the start, so that, for example, items of expense are not confused with those which should be capitalized, and vice versa.

Reference to accounting ability reminds me that it is quite essential that the constructive accountant or "system builder" be thoroughly versed in internal auditing and checking methods. The problems incident to the work of the external auditor may, in turn, be greatly reduced where efficiency has featured the internal audit control setup.

It is one thing, however, to set up a system, and an entirely different matter to keep it functioning as it was originally intended. I would stress, therefore, the importance of what I term a "system's audit." To assure himself that the internal check, as well as other features of the system, are operating as intended, the controller will see to it that the internal auditing staff is properly instructed to bring to light any deviation from established procedures. It is always well to remember that "we attain excellence only through eternal striving, and maintain it only through eternal vigilance."

As the result of recognition of the great importance of tax accounting, in many sizable concerns we find tax departments in operation—or, in any event, at least one high-grade man attached to the controller's staff who devotes the greater part, if not all, of his time to handling tax problems. The wise controller will do well to heed the old truism that "two heads are better than one," and make use on occasion of professional tax consultants. Experience has proven that it does not pay to become too self-sufficient in the handling of tax problems.

Any system of control, worthy of the name, should make provision for corraling and publicizing in understandable terms any deviations from the general plan of campaign, whether or not such a plan wears the uniform commonly described as a "budget." Apropos of this

suggestion, some very worthwhile results may be obtained through the use of "unit" systems, where conditions are such as will lend themselves to the use of such "measuring sticks."

The operation of a unit plan makes it fairly easy to detect improbable variations from what should be the figures under normal operating conditions, and thus affords a very effective means of eliminating large errors of all kinds.

A study of the trucking costs per unit of a large ice cream manufacturer might, for example, disclose that such costs at one branch were greatly out of line with those of the other branches—due, possibly, to a faulty understanding on the part of the local manager as to the best way in which to handle his special delivery problems, or to an error of judgment as to the type of automotive equipment best suited to the needs of that particular territory, or to any one of several other conditions.

I should not presume, before such a gathering of accounting experts, to discuss the many ramifications of controlling accounts. However, while enumerating various factors required for internal audit control, I feel I should mention the fact that suitable controlling accounts are a rudimentary necessity in the mechanics of an accounting system. In addition to the advantages which accrue from the standpoint of minimizing the effort involved in locating errors, they have other obvious advantages of an internal check nature which must not be overlooked.

More satisfactory results are obtained from the auditing staff when manuals of audit procedure are used, for the reason that misunderstandings are minimized and uniformity of work methods is attained by bringing to bear on current problems the best results of past experience, arranged in the order best suited for reference. The use of work programs—chronological lists of auditing work to be done within stated periods of time—is also worthy of mention.

Reports of all kinds prepared by the controller's department, and particularly audit reports, merit the most careful attention. The very nature of the auditor's work subjects him to ready criticism, if he should be guilty of misstatements; and for self-protection alone, if for no other good reason, he must use great care in the preparation of his reports, the action-producing qualities of which will be greatly enhanced if they are based upon adequate working papers. Recommendations contained in audit reports are merely empty words, if action is not taken thereon.

Provision should be made for the regular checking by the account-

ing department of all contracts, for the purpose of ascertaining the bookkeeping and accounting requirements incident thereto.

A series of comments and illustrations, without particular regard for the logic of their sequence, may not be amiss at this stage, in order to serve as a "take-off" for later discussion:

*Purchases:* From an auditing standpoint, much of the value of securing competitive bids is nullified if proper provision is not made for preserving the bids for audit inspection. When purchases are made at prices higher than those quoted in the lowest bids, the auditor should see to it that ample explanation is forthcoming.

Where proper internal audit control is in effect, the purchasing agent will not be found attesting to the receipt of goods.

Careful records should be kept in the shipping department of all purchases returned to vendors. The reports to the accounting department of all such shipments should be carefully checked by the auditor, in order to be sure that such returns are not paid for.

Purchases for employees' personal use should not be permitted through the accounts of the company.

Great care should be exercised to prevent invoices of vendors from becoming fraudulently presented for payment a second time.

The duties of stock clerks, receiving clerks, and shippers should be separated, wherever possible.

Certain purchases which do not ordinarily fall under well-defined purchasing department regulations require special auditing attention. In this category are included, for instance, bills from public service companies, bills for professional services such as legal and auditing, as well as those for insurance, rent, taxes, and membership fees.

*Inventories:* In accordance with the principle that merchandise is the equivalent of cash, a definite policy must be adopted to the effect that serious discrepancies in inventories will not be tolerated, and that those who handle merchandise will be held as strictly accountable as those who handle cash.

The frequency with which physical inventories are taken will have a decided influence on the effectiveness of the whole plan of inventory control.

When proper classifications of inventory are carried, conditions of serious overstocking can be prevented, and the existence of imperfect or obsolete goods will be disclosed. Careful attention should also be given to the handling and recording of scrap.

Merchandise on consignment, in the hands of carriers, and in warehouses, merits special attention.

Inventories at branches should be checked simultaneously with the verification of the cash and receivables at those locations.

The actual taking of inventories should be done occasionally under the supervision of the internal auditor.

The whole inventory program, including the issuance of standard practice notices and other forms of instructions relative to inventory taking and compilation, should be under the control of, or subject to the approval of, the controller.

*Fixed Assets:* Probably no single occurrence within our memory has caused more attention to be focused on the importance of thoroughly detailed property accounting than has that famous Treasury Decision now commonly known as "T. D. 4422." In attempting to comply with the requirements of this momentous edict, many business concerns have found to their deep chagrin that they were woefully behind the times in the application of modern methods to accounting for fixed assets. Such antiquated laxity in the handling of their cash and receivables would never have been countenanced, yet they have been content not only to acquiesce in the preparation of erroneous and misleading statements, but by failure to provide a few reasonable safeguards, they have virtually invited outright theft.

A modern business concern requires detailed and well-kept fixed property records just as surely as it requires that records of cash, inventories, receivables, and investments be kept in one hundred per cent perfect working order.

Inactive or non-operating property, and equipment in the so-called "salvage" classification, should receive very careful consideration, from the standpoint of proper valuation, as well as from that of disposing of or utilizing such property to best advantage.

Some companies regard the handling of their inactive properties of such importance that monthly analytical comparative reports of changes in the "Inactive Property" accounts, and of the expense for carrying such properties, are made a definite part of the business of their executive committees.

Transfers of equipment from one plant to another, or from one department to another, must be handled in accordance with the provisions of a properly conceived plan which provides for authorizations and full information; otherwise, a chaotic fixed asset situation is bound to exist.

*Securities:* Much newsprint has been consumed in accounts of embezzlements of securities by trusted custodians, who succumbed to their desires to "borrow" for one purpose or another. Both internal and external auditors should make it a practice to note the serial numbers of all securities, at each examination, and to account carefully for all changes which occur from one period to another.

Never less than two responsible officials, acting in conjunction with each other, should have access to the company's securities, which should be kept in a safety deposit box at a bank of unquestioned stability.

The most careful attention should be given by the auditor to making sure that all income from securities is properly accounted for.

*Cash Disbursements:* A properly conceived set of "Disbursements Regulations," setting forth in detail all possible types of expenditures, and indicating clearly the approvals required before cash may be disbursed, will, if rigidly adhered to by the accounts payable and internal auditing departments, prove to be one of the most valuable pieces of administrative mechanics in use anywhere in the business.

A careful follow-up of old outstanding checks, frequently discloses situations which should be known and acted upon without delay.

Proper supervision of the handling of checks, incident to reconciliations of bank statements, brings to light, now and then, a number of situations such as forged signatures and endorsements, which aid in the discovery of padded payrolls and other abuses.

Those who sign or countersign checks should never do so in blank in advance, and should insist that all supporting vouchers be attached when checks are presented for signatures. Incidentally, the responsibility of affixing countersignatures should be taken seriously, and not performed in a haphazard or perfunctory manner.

*Sales:* Passing over the details of procedure from the point where the order is taken to the point where shipment is made, I want to project into bold relief the important idea that *a sale is not completed until the money is in the till*. From strictly technical accounting and legal standpoints, I know such a statement is inaccurate; but from a profitable business control viewpoint, there is a lot to be said in its favor.

In addition to other important considerations, there is a very important forward-looking auditing feature involved in the credit-granting process—an advance determination, if you please, of the

final effect which sales will make on the earnings account. Important auditing functions are also brought into play in the course of efforts to collect accounts. Such observations as these may very well suggest the idea that the credit man should be attached to the controller's division. In many cases, he is.

A real highlight problem of internal audit control is that of keeping at a minimum abuses in connection with cash sales.

Sales discounts and allowances at times offer the unscrupulous bookkeeper or cashier a profitable field in which to operate.

*Receivables:* Accounts written off as uncollectible should be accompanied in every instance by a full explanation of the reasons for such disposition, and should be properly approved by a responsible executive. They should be carried in a separate, well-arranged "Suspense" ledger, statistically controlled by the accounting department. Collections on such accounts should be carefully checked by the auditor to the accounts affected.

Bills and statements should be mailed by some person in the accounting department duly assigned to this work. In most lines of business, the practice of having bills and statements delivered by salesmen should be prohibited.

Needless trouble is caused wherever accounts due from employees are allowed to stand for any length of time. Prompt settlement of such accounts should be insisted upon.

Occasional tactful confirmations of customers' balances by the internal auditor serve a very useful purpose.

*Cash Receipts:* Cash intake problems of different kinds of businesses vary widely. From the very nature of things, the procedures are much more complicated, for example, in a concern which supplies the dairy products needs of over a million people, involving the issuance of more than ten million bills in the course of a year, with the multiplicity of detail entailed in the collection and banking of cash incident thereto, through the medium of more than fifty branches operating in several states, and necessitating transactions with some fifty-odd banking depositories, than would be the case with a large automobile distributor selling nine or ten thousand fairly high-priced cars in the course of a year, with all his operations under one roof.

The problem of actually getting cash into the bank without interference on the part of the underworld gentry has not been a particularly easy one to solve, in some cases. The use, however, of

certain types of safes, in the operation of which it is necessary that representatives of the bank or transport company be present in order that the safe may be opened with the aid of a second key which remains permanently in their possession, has proven very effective as a deterrent of daylight raids.

Reference probably should be made to those classes of cash receipts which result from transactions not within the scope of the regular operations of the business—as, for example, receipts from the sale of scrap or waste, collection of insurance claims, rents, and returned insurance premiums.

Observations as to whether checks are post-dated, whether they are signed, whether the written amount agrees with that shown by the figures, restrictions in connection with endorsements, and many other such details, should be provided for in the regulations with which all persons handling cash should be supplied.

*Payrolls:* Few of the policies of a business exert greater influence on its success than those which prescribe the manner in which its payroll procedures are administered.

Whether wages should be paid by check or cash is sometimes difficult to decide. I feel that, in my company's case, the advantages of the check method greatly outweigh the disadvantages. Whereas, prior to shifting over, a few years ago, to the check payment method and the use of the two-key cash chests previously mentioned, we averaged several branch holdups a year, since the simultaneous adoption of the two features just referred to, we have not suffered a single attempt at a holdup in any of our offices. How much of the credit is due to payment by check, and how much to the new equipment, would be difficult to say. The fact remains, however, that the incentive for holdups has been removed.

Unclaimed wages may be controlled much more satisfactorily when checks rather than cash are used for payroll purposes.

Wherever the same clerk who prepares the payroll also distributes the cash or checks to the employees, it is essential that such payrolls be audited.

The advantages, from an auditing standpoint, of a wise use of the records of the employment department should not be overlooked.

The internal auditor should accompany the paymaster occasionally, and actually participate in the distribution of the payroll, investigating all points which may arise which, in any way, look questionable.

Commissions and contest prize money paid to salesmen should

receive the auditor's regular and careful scrutiny, so as to guarantee that monies paid out are reconcilable in every particular with rates and other provisions previously approved by the proper managing authority.

Very beneficial effects from an all-round standpoint may be accomplished by requiring that all proposed payroll changes be approved by a finance committee before being put into effect.

### *Records*

The psychological value of records is a factor which should receive the most careful consideration. Due to faulty design, careless recording, and certain other reasons, they have not in many cases brought about the intended results.

Just as it is essential for a good draftsman or machine designer to utilize stock parts (bolts, nuts, etc.) in creating mechanical devices, it is also essential that those responsible for the design of records be thoroughly posted on the standards governing their line of endeavor.

Satisfactory results in the handling of the forms of a large company may be realized only when the responsibility for all matters pertaining thereto has been centralized.

Although it would be very difficult to determine the exact amount of the losses incurred in time wasted in the compilation of information of doubtful or no value, the fact remains that altogether too many such records are in existence and waiting for an alert auditor or controller to unearth and eliminate them.

In concluding this very sketchy treatment of the important subject of "records," let me mention a type of record which should receive more executive consideration than it is given, in many instances. I refer to journal entries. Too often, incompleteness and inaccuracy characterize these vouchers. Before they are posted, they should be thoroughly checked and approved by the proper supervisory personnel. The controller and other company officials should be required to give their attention from time to time to the examination and approval of certain important journal entries.

### *Mechanical and Other Equipment Aids*

The evolution of business machines has progressed to the point where it would today be foolhardy to attempt to develop a system of internal audit control for a business of any size, without taking into consideration the advantages which would result from their use.

As suggestive of some of the more unusual types of mechanical equipment which have become practically indispensable, I should like to mention a few examples. In doing so, it is not my intention to express a preference for any particular types of equipment, but rather to use them simply as illustrations of the extent to which business control has become dependent upon such aids:

Automatic cashiers	Electric eyes	Slug ejectors for pas-
Bookkeeping machines	Fare boxes and registers	simeters
Burglar and fire alarms	Manifold machines	Sortergraphs
Calculating machines—	Money counters	Sprinkler systems
motor- and hand-driven	Numbering machines	Tabulating and sorting
Cash registers	Odometers	machines
Change-making machines	Pneumatic tube systems	Telautographs
Check-signing machines	Protectographs	Time clocks
Chemical warfare gas	Postage meters	Time locks
equipment	Slot machines	Time stamps
Counting machines		Water screens
Counting scales		Weighing scales

### *Conclusion*

Now, therefore, in the light of the various points which I have presented for your consideration—some of which, I hope, will stimulate a lively and constructive discussion—my resume of my answer to the question asked in the title of this paper is as follows: A satisfactory state of internal audit control may be said to have been achieved when the factors of organization, personnel, policies and procedures, records, and mechanical and other equipment aids, have been so developed and combined as to produce a harmonious whole which will definitely aid in realizing an earnings account with a credit balance commensurate with what management and stockholders might reasonably expect as a return on their investment of effort and capital.

CHAIRMAN PACKARD: Thank you, Mr. Tucker, for a very complete and excellent presentation of your subject.

Both of our next two speakers have rather short papers for you, but, having in mind that many of the members may be planning on early trains, we are going to confine the discussion following each speaker to not more than ten minutes. We are now ready for questions for Mr. Tucker.

C. H. TOWNS (*Partner, Loomis, Suffern & Fernald, New York, N. Y.*): Mr. Tucker said that the internal auditor ought to report

to the controller. It just happens that in the case with which I have been familiar, where the work of the internal auditor seemed to me most effective, he reported to the vice president who, in that case, was performing most of the functions that would ordinarily be performed by the president, because the president was in a semi-retired state. I would like to ask Mr. Tucker what objections he feels there are from an organization point of view to that sort of setup.

MR. TUCKER: No objections, necessarily. It seems to me that that is a matter for your own officials to decide, and depends entirely on the requirements of your own internal organization setup. I spoke, of course, from the standpoint of my own personal experience; in accordance with the setup in my own organization. It might very well work out to advantage as you suggest in your particular case.

FRED A. SHARP (*Controller, New York Hospital, New York, N. Y.*): I would like to answer Mr. Towns' question, if I may, by our setup. As controller, I am responsible to the board of governors, and the internal auditor, in consequence, is responsible to me. Our outside auditors audit me and they in turn are responsible to the audit committee of the governing board. It ties it up completely. The internal audit is for my satisfaction, the external audit is for the governing board.

MR. TUCKER: Your case is very nearly an exact parallel of mine.

SCOTT A. EDGELL (*Budget Supervisor, Ohio Rubber Co., Willoughby, Ohio*): On the question of payroll, do you see any particular weakness in the paymaster passing the checks in a large industry over to the foreman to pass out? They have nothing else whatever to do with the payroll. They are just a means of distributing the checks through the plant.

MR. TUCKER: It would seem to me that the results would depend very largely on the trustworthiness of the foremen involved. I think you would be courting trouble under some circumstances by a practice of that kind.

BERNARD J. SLAUGHTER, JR. (*Controller and Office Manager, The Crane & Breed Casket Co., Cincinnati, Ohio*): Would

you give us a little further information about surety bonds as an essential part of the scheme of internal audit control?

MR. TUCKER: Although I believe that they have a definite place in a system of internal audit control as far as protecting employers to the extent of determined losses is concerned, I believe that many times they are relied upon to too great an extent by company officials.

R. F. WHISLER (*Head, Standards Dept., National Cash Register Co., Dayton, Ohio*): I would like to ask what, in your opinion, from the audit standpoint, is the value of having time clerks reporting, we will say, to the time study supervisor or the factory superintendent?

MR. TUCKER: It all depends, it seems to me, on the requirements of your own particular internal organization setup, as to what should be done under the circumstances.

Looking at the situation, however, from the standpoint of what might accomplish the best internal audit control, I should think, offhand, that a better organization lineup would be in effect if the time clerks reported directly to the time study supervisor. That would be my impression, although I have not had very much actual experience with that kind of a situation, and I would, of necessity, want to give the matter greater consideration if I were up against an actual problem of the kind suggested.

JOSEPH A. PETRICK (*Cost Accountant, Kellogg Switchboard & Supply Co., Chicago, Ill.*): I have to disagree with you on that, that the timekeepers should report to the time study men. It seems to me it is more proper that they report to the cost accountant who has charge of the payroll, and who is responsible for making sure he is not paying out any more money than the workers are entitled to.

MR. TUCKER: Well, as I suggested before, undoubtedly there are points of view at variance with that which I expressed, which are worthy of consideration.

HOWARD C. ZOOK (*Cost Accountant, The Wooster Brush Co., Wooster, Ohio*): I would like to ask Mr. Tucker a question. In selecting the personnel, would you be governed by the school record of that person, or would you dig deeper into the personality of that person?

MR. TUCKER: In our own particular case, we are trying to get into our organization, people who are worthy from an all-round standpoint. We investigate their past experience, their educational background, and take into consideration their personality; and last, but not least, as suggested in my paper, we are trying to determine to the best of our ability, how they rate from the standpoint of their physical condition. We would not, for example, think of buying horses or cows without thorough veterinarian examinations. Yet in many cases we could incur far greater risks if we hired employees without first having a doctor's certificate attesting to the soundness of their physical condition.

CHAIRMAN PACKARD: Thank you, Mr. Tucker.

In January of this year, our Association published a very interesting article by one of our Boston Chapter members, Jonathan N. Harris, entitled, "What Did We Earn Last Month?"

In his article, with which I assume the majority of you are familiar, Mr. Harris advocates the exclusion of the uncontrollable items of factory expenses such as fixed charges, when calculating the inventory value of goods produced, and proceeds to give a case example of this plan in actual use.

So many comments were received at Headquarters in connection with Mr. Harris' article, that your committee felt that it might be helpful to give the subject a further airing at this session.

We therefore arranged with our good friend, Howard Cooper, to make a restatement and elaboration of Mr. Harris' proposals, and, incidentally, to voice some very definite ideas of his own on the subject. Dr. Cooper, in addition to being a Past President of our Baltimore Chapter, is a graduate of the School of Commerce, Accounts and Finance of the University of Denver, having received the degree of Bachelor of Commercial Science in 1923 and the degree of Bachelor of Science in 1925. He received the degree of Master of Science from Columbia University in 1927, and the degree of Doctor of Philosophy from Johns Hopkins University in 1932.

Since 1928 he has been Instructor in Accounting at Johns Hopkins University. I take pleasure in calling upon Dr. Cooper.

## ELIMINATION OF FIXED OVERHEAD EXPENSE FROM INVENTORY AND PRODUCTION COSTS UNDER THE STANDARD COST PLAN

DR. HOWARD E. COOPER

Instructor in Accounting, Johns Hopkins University,  
Baltimore, Md.

THIS paper grows out of an interesting and novel idea presented in the Bulletin of January 15, 1936, by Mr. Jonathan N. Harris under the title "What Did We Earn Last Month?" concerning which there was a considerable degree of controversy as evidenced by the subsequent discussion in the Forum.

### *Outline of Proposal*

Due to the limited time available I shall confine my discussion to the central point of issue; namely, the idle plant aspect of a seasonal business. It is claimed that under a general practice of absorbing currently in profit or loss over- or under-absorbed factory burden, the resulting monthly profit figure is likely to be distorted. This is particularly true in those companies whose activities are highly seasonal. For purposes of this discussion let us assume a company whose sales are highly seasonal, also whose productive activities are seasonal in that the peak of production comes during those periods immediately prior to those in which the goods are sold.

By following the so-called orthodox methods of accounting it is claimed that during those periods when production activities are high and sales are low, there results a situation in which production costs are anticipated and charged to inventory through the absorption of overhead at a fixed rate. This creates an accumulation of over-absorbed burden, to the extent that production exceeds normal, which, when closed into profit and loss for the period, may show an abnormal profit. Conceivably an increasing profit can be shown in the face of declining sales. On the other hand when sales activities are up and production is down, these periods must bear the normal or standard cost of sales and in addition absorb a substantial unabsorbed overhead expense debit, which can result in decreased profit in the face of increased sales. It has been questioned if such a situation can be defended by the explanation that the variations in volume of production should logically bring about such a result.

In order to correct this difficulty a new conception of the cost to

manufacture has been proposed. The essential difference is that the factory overhead expenses be broken into two groups; those which vary more or less with production on one hand, and those which are more or less fixed on the other. It is proposed that the standard cost to manufacture be made up of material, labor and variable overhead costs; that the fixed overhead expense, variations of which ordinarily give rise to a volume variance, be eliminated from factory costs and absorbed currently in the profit and loss statement as they occur, in the same way in which selling and administrative expenses are absorbed. It is claimed that this eliminates the necessity for determining normal overhead rates and that all expenses of manufacture vary more or less with the volume of production and are controllable. The question is not so much one of standard cost accounting procedure, in that this proposed change be made with the idea that it will aid management in controlling costs, as it is one of the correct determination of periodic profits.

#### *Illustrative Figures Presented*

For purposes of giving point to the argument Table I on Page 312, taken from the Bulletin,<sup>1</sup> shows the results of operations by quarters.

Table I shows the Profit and Loss Statements both under the orthodox plan of accounting and under the direct cost plan and is based upon the following assumptions.<sup>2</sup>

1. Annual fixed factory overhead expenses amount to \$75,000 per quarter or \$300,000 per year.
2. The standard manufacturing cost of normal production for the year, including the above \$300,000 of fixed charges, is \$1,500,000.
3. The allowance in standard manufacturing cost for fixed charges is therefore \$300,000 divided by \$1,500,000 or 20%.
4. Actual cost of materials, direct labor, and direct production expenses are equivalent in total (for this illustration) to the standard cost of these items—in other words there are no manufacturing variances.
5. Sales volume is exactly the same under both the orthodox and the direct cost plan of accounting.
6. Expenses, including in this category all charges against profit and loss except cost of sales and fixed factory charges, are the same under both the orthodox and the direct cost plan of accounting, and (for the purposes of illustration) are assumed to be \$63,000 per quarter, thus eliminating them as

<sup>1</sup> N. A. C. A. Bulletin, Vol. XVII, No. 14, March 15, 1936, pp. 756-7.

<sup>2</sup> Ibid., pp. 755-6.

	P&L Statements (under orthodox acctg. plan)		P&L Statements (under Direct Cost acctg. plan)	
1st Quarter:				
Sales .....	\$184,000		\$184,000	
Standard cost of sales .....	100,000		80,000	
Gross profit .....	84,000		104,000	
Expenses .....	63,000		63,000	
Operating profit .....	21,000		41,000	
Unabsorbed factory overhead .....	15,000			
Fixed factory expense .....			75,000	
Net profit or loss ..	(profit)	\$ 6,000	(loss)	\$34,000
2nd Quarter:				
Sales .....	269,000		269,000	
Standard cost of sales ..	175,000		140,000	
Gross profit ..	94,000		129,000	
Expenses ..	63,000		63,000	
Operating profit ..	31,000		66,000	
Overabsorbed factory overhead .....	39,000			
Fixed factory expense ..			75,000	
Net profit or loss ....	(profit)	70,000	(loss)	9,000
3rd Quarter:				
Sales .....	668,000		668,000	
Standard cost of sales .....	570,000		456,000	
Gross profit ..	98,000		212,000	
Expenses .....	63,000		63,000	
Operating profit ..	35,000		149,000	
Unabsorbed factory overhead .....	40,000			
Fixed factory expense ..			75,000	
Net profit or loss .....	(loss)	5,000	(profit)	74,000
4th Quarter:				
Sales ..	388,000		388,000	
Standard cost of sales .....	300,000		240,000	
Gross Profit .....	88,000		148,000	
Expenses .....	63,000		63,000	
Operating profit .....	25,000		85,000	
Unabsorbed factory overhead .....	55,000			
Fixed factory expense ..			75,000	
Net profit or loss ....	(loss)	30,000	(profit)	10,000
Annual Results:				
Sales .....	1,509,000		1,509,000	
Standard cost of sales .....	1,145,000		916,000	
Gross profit .....	364,000		593,000	
Expenses .....	252,000		252,000	
Operating profit .....	112,000		341,000	
Unabsorbed factory overhead .....	71,000			
Fixed factory expense .....			300,000	
Net profit for year ....		41,000		41,000

TABLE I

a factor having influence in the results. (Of course I realize that such an assumption is never actually realized in business, but this is beside the point.)

7. Production is assumed to have occurred as follows, in which 20% of each figure represents the allowance for fixed factory charges under the orthodox accounting plan:

First Quarter .....	\$ 300,000
Second Quarter ..	570,000
Third Quarter .....	175,000
Fourth Quarter .....	100,000
	<hr/>
	\$1,145,000

It is claimed that under the orthodox procedure, the reported profits are distorted by reason of the substantial over- or under-absorbed burden figures, whereas, under the direct cost plan these fixed expenses are absorbed as they are incurred with the result that the profit or loss bears a more reasonable relationship to sales activity. For example, it is claimed that it is difficult to explain a situation such as prevails in the third quarter in which the sales have risen from \$269,000 to \$668,000 with the result that a \$70,000 profit has been converted into a \$5,000 loss.

#### *Correction of Figures to Eliminate Variation in Markup*

It should be explained that the gyrations in profit in this instance are caused not so much by the over- or under-absorbed burden as by the fact that in the third period the percentage of markup based on cost has been so reduced that the sales price is no longer sufficient to show a profit. It will be noted that in the first quarter the markup based on cost is 84%, the second 53.7%, the third 17.2% and the fourth 29.3%. If it were necessary to mark these goods down to move them because of the over-production of merchandise in the preceding period, the showing of a loss in the third period might be in order. I do not believe that this is what was intended. I have, therefore, in Table II, restated the sales figures basing them on a fixed percentage of markup which in this case approximates 31.5%. The other assumptions remain unchanged. This I believe eliminates a confusing factor and simplifies the study of the problem.

The results of operations under the various circumstances might be more readily grasped by reference to the charts on page 315.

Line A, Chart 2 represents the net profits under the original figures following the orthodox practice, whereas line C represents the net

	P&L Statements (under orthodox acctg plan)	P&L Statements (under Direct Cost acctg plan)	
<b>1st Quarter</b>			
Sales .....	\$131,000	\$131,000	
Standard cost of sales .....	100,000	80,000	
Gross profit .....	31,000	51,000	
Expenses .....	63,000	63,000	
Operating loss .....	32,000	12,000	
Unabsorbed factory overhead .....	15,000		
Fixed factory expense .....		75,000	
Net loss .....	47,000	87,000	
<b>2nd Quarter</b>			
Sales .....	231,000	231,000	
Standard cost of sales .....	175,000	140,000	
Gross profit .....	56,000	91,000	
Expenses .....	63,000	63,000	
Operating loss .....	7,000		
Operating profit .....		28,000	
Overabsorbed factory overhead .....	39,000		
Fixed factory expense .....		75,000	
Net profit or loss .....	(profit) 32,000	(loss) 47,000	
<b>3rd Quarter</b>			
Sales .....	752,000	752,000	
Standard cost of sales .....	570,000	456,000	
Gross profit .....	182,000	296,000	
Expenses .....	63,000	63,000	
Operating profit .....	119,000	233,000	
Unabsorbed factory overhead .....	40,000		
Fixed factory expense .....		75,000	
Net profit .....	79,000	158,000	
<b>4th Quarter:</b>			
Sales .....	395,000	395,000	
Standard cost of sales .....	300,000	240,000	
Gross profit .....	95,000	155,000	
Expenses .....	63,000	63,000	
Operating profit .....	32,000	92,000	
Unabsorbed factory overhead .....	55,000		
Fixed factory expense .....		75,000	
Net profit or loss .....	(loss) 23,000	(profit) 17,000	
<b>Annual Results:</b>			
Sales .....	1,509,000	1,509,000	
Standard cost of sales .....	1,145,000	916,000	
Gross profit .....	364,000	593,000	
Expenses .....	252,000	252,000	
Operating profit .....	112,000	341,000	
Unabsorbed factory overhead .....	71,000		
Fixed factory expense .....		300,000	
Net profit for year .....	41,000	11,000	

TABLE II

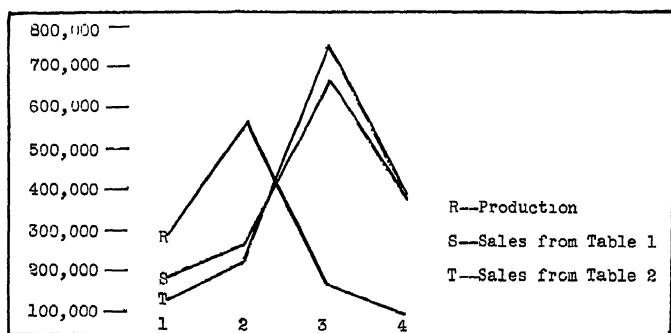


CHART 1

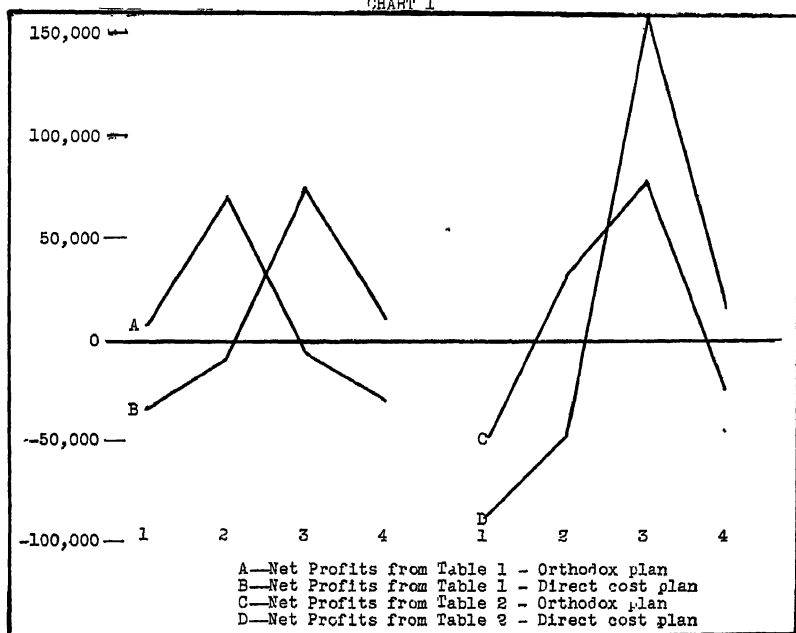


CHART 2

profits under the revised figures following the orthodox practice. Line B represents the net profits under the original figures following the direct cost plan whereas line D represents the net profits under the revised figures following the direct cost plan. The quarterly sales and production are also shown in Chart 1 in order to compare the variations in these items with those in the net profit figures under the various proposals.

It will be noted that by using the revised figures which eliminate the effect of the variations in markup that the net profits do follow the trend of sales under each plan. An interesting point is to be noted in this connection, i.e., that the fluctuations in net profit are considerably more violent under the direct cost plan than they are under the orthodox plan, also that these fluctuations are proportionately much more violent than the fluctuations in sales. This is by reason of the fact that under the orthodox plan a larger part of the expense of manufacture is absorbed during the period when the sale is made than is the case under the direct cost plan.

#### *Problem of Under- and Over-absorbed Burden Remains*

This does not dispose of the question, however, but it simply means that as between periods the variations between productive operations and sales volume must be more violent even than those represented. For example, in making use of the assumptions stated, if the volume of production in any quarter were to exceed \$690,000 the over-absorbed burden would be sufficient to absorb the selling and administrative expenses so that a profit could be shown even though there were not a dollar of sales made that quarter.

Assume, for example, that in one period the production amounted to \$690,000 which would result in an over-absorbed burden of \$63,000, and in the following quarter the production is \$100,000 with the result that the under-absorbed burden is \$55,000 and the sales are as shown at the top of page 317.

Is the profit correctly shown when with three times the volume of sales a profit of \$31,000 is converted into a loss of \$23,000? It might be claimed that the situation is reduced to absurdity but this is not necessarily so. The situation is possible and it is proper to question the results so obtained. Stated more simply, is it proper to show a profit by manufacturing goods for inventory? Most accountants would promptly answer no, but if over- or under-absorbed burden is to be taken up when it develops, that situation is possible.

	P & L Statements (under Orthodox acctg. plan)	P & L Statements (under direct cost acctg. plan)	
1st Quarter:			
Sales .....	\$131,000	\$131,000	
Standard cost of sales .....	100,000	80,000	
Gross profit .....	31,000	51,000	
Expenses .....	63,000	63,000	
Operating loss .....	32,000	12,000	
Over-absorbed factory overhead ..	63,000		
Fixed factory expense ..		75,000	
Net profit or loss ....	(profit) 31,000	(loss) 87,000	
2nd Quarter:			
Sales .....	395,000	395,000	
Standard cost of sales ..	300,000	240,000	
Gross profit .....	95,000	155,000	
Expenses .....	63,000	63,000	
Operating profit .....	32,000	92,000	
Unabsorbed factory overhead .....	55,000		
Fixed factory expense ..		75,000	
Net profit or loss .....	(loss) 23,000	(profit) 17,000	

### *Problem Is When To Absorb Fixed Overhead Expenses*

For purposes of discussion, the problem is a question of the determination of the proper interim period in which to absorb certain fixed factory overhead expenses. There are three possibilities. First; an expense can be absorbed in the period in which it is incurred; second, it can be absorbed in a period prior to its actual occurrence; and third, it can be deferred and absorbed at a later period.

Under the direct cost plan the expense for fixed factory overhead is absorbed in the period in which it is incurred. Opposed to this there is a well-established principle of accounting in which all costs in connection with an article of merchandise should in so far as possible be charged to the same period in which the credit is taken for its sale. This may in some cases call for the anticipation of a cost or it may call for a cost being deferred.

Here is a principle which to me offers the basis for a line of thought in which a solution for the problem can be found. A solution which will preserve the conception of manufacturing cost and at the same time show a profit or loss figure in keeping with what one might reasonably expect. A solution on this basis will not be difficult to present to the board of directors.

The distortion of profits appears to be not so much a question of the proper determination of what the standard cost to manufacture should be, as of what to do with the over- or under-absorbed burden growing out of a fixed rate of overhead absorption.

It has already been suggested in the Forum that the under- or over-absorbed overhead be not absorbed currently but deferred so that the under-absorbed overhead of one period will offset the over-absorbed overhead of another period. This plan has merit in that it eliminates a large part of the objection which has been raised to unreasonable resulting profits when it has been absorbed currently. The objection to deferring these under- or over-absorbed items is that in case the actual production should fall short of the planned production (not an uncommon situation), there may result a substantial unabsorbed burden at the end of the year which may be embarrassing. What was thought to have been a substantial profit may turn out to be much less or none at all.

#### *A Suggested Solution*

The procedure I should recommend for a business similar to the one described, would, I believe, meet the objections to the plans above. I would not take up the over- or under-absorbed burden currently as indicated in the orthodox plan of accounting but I would defer it as just described with an important modification. This modification has its purpose in meeting that situation in which actual production differs from that which was estimated. As soon as it becomes apparent that there may be a balance of under- or over-absorbed burden at the end of the year, I should start at once to build up a reserve of sufficient size to absorb it. For example, you are into the year's operations and it is found that sales are not what was expected, production is slowed down, and it appears the year will be closed with a debit idle plant variance. Each month's profit and loss can be charged and an appropriately labeled reserve can be credited with an amount sufficient to build up a reserve which will absorb the expected debit variance at the end of the year. Conversely, if it appears that things are going along better than was expected, sales are greater, the volume of production is greater and it appears that there will result a credit variance at the end of the year, each month's profit and loss can be credited and a reserve can be debited in order to build up a sufficient reserve to absorb the credit variance.

This reserve might be considered an inventory reserve. As to

the propriety of an inventory reserve for the purpose of absorbing this kind of an item, it can be said that, had it been possible to know what the actual volume of production would be, the overhead rate would have been set so as to absorb this overhead. The adjustment to inventory is in effect a correction of inventory values giving effect to the newly determined information. It shows more closely what the inventory should be had you been able to correctly anticipate the volume of production. This has the result so far as net profits are concerned of giving effect to more recently discovered information regarding the volume of plant activity.

The feasibility of treating this as an inventory reserve would depend to some extent upon the length of the manufacturing period and the size of the inventory carried. If the manufacturing period is short and inventory is not large, it may be more desirable to carry the reserve as a prepaid expense or deferred income item as the case might be until such time at the end of the year as it is closed out by absorbing the over- or under-absorbed burden.

I believe that this plan has a distinct advantage over the direct cost plan because it does tend to charge that period making the sale with the costs of those sales. It does not lead to wide fluctuations in profits which are the result of the direct cost plan. I believe it represents a more defensible net profit figure than the other plans considered. It does not destroy the concept of cost to manufacture, nor does it destroy any management features of present practice such as the determination of an idle plant variance. Assuming the overhead rate to be carefully set, the result is a net profit figure based on the best information obtainable at the time the overhead rate is set but corrected currently as the year's operations unfold.

CHAIRMAN PACKARD: Thank you, Dr. Cooper.

And now let us see how much discussion we can crowd into the next ten minutes.

J. C. METSCH (*Cost Accountant, Lehn & Fink Products Co., Bloomfield, N. J.*): I would like to point out that in advertising nationally advertised products, where a large expenditure is made before the product is actually sold, the expense is oftentimes spread over a period of months so as not to burden one month with the excessive expense. I think the same can be done in your case, by charging more expense to the month where there is the largest amount of production. If we are going to say what is fixed burden and

what is not, we are open to big arguments. After all, fixed burden in my opinion should be any kind of a burden which is necessary to keep the plant running. Still, many items of expense may be called fluctuating expense. It is rather a big problem.

DR. COOPER: I started out on the assumption, in the paper, that you can separate your fixed from your variable overheads. In some cases I think there is some question about that, but the proposal I had in mind does not disturb the conception of cost of manufacture. You cannot get away from cost of manufacture, anyway.

Under Mr. Harris' proposal, it was suggested that you make an inventory adjustment at the end of the year for inventory purposes. You will always have to keep this fixed overhead in mind, also, for the problems of setting the selling prices in so far as the selling prices may be set by costs.

WILLIAM H. S. ROGERS (*Accountant, McKinsey, Wellington & Co., Boston, Mass.*): In accordance with Mr. Cooper's suggestion that reserve be set for a deferred credit or charge during the months of the year when we had a high over-absorbed or under-absorbed burden, I would like to add this observation; that is, that one of the national companies that I know of, with national distribution, has tried to get all of their costs into their different territories and zones. In order to accomplish that they set up what they call an "extra cost account," and to each of their standard costs they add a certain percentage for extra cost.

In the early months of the year they developed a large credit in this account, and then in the latter months of the year when the factories are not operating at normal capacity, they have a debit that they can use against the accumulated credit.

DR. COOPER: The substance of the whole thing, as Mr. Harris insists, is, What is your profit? And the goal is to attempt to determine, as nearly as possible, an interim profit. We are not concerned so much here with annual profit, but profit, say, by months.

JOSEPH A. PETRICK (*Cost Accountant, Kellogg Switchboard & Supply Co., Chicago, Ill.*): Dr. Cooper, I would like to have your opinion as to whether it is proper to charge burden on plant assets that are made by a company for their own use.

DR. COOPER: I should say "Yes." I think it is quite all right, representing an actual expenditure.

MR. METSCH: Do you think it is logical to take out of factory burden certain elements? Does it not rather destroy the picture?

DR. COOPER: Yes, I think it does.

CHAIRMAN PACKARD: The third and last scheduled subject for this afternoon is, "Should Materials Be Charged into Process at Actual Cost or Replacement Cost?" Again we have for our speaker a chapter Past President. He graduated from Pennsylvania State College in 1918, and following his graduation saw seventeen months' service overseas with the 20th Engineers.

From 1919 to 1922, he was with the Reading Iron Company on production work. From 1922 to 1924 he was paymaster and cost accountant for the Temple Malleable Iron and Steel Company at Temple, Pennsylvania.

In 1924 he became head of the cost department of William H. Luden, Inc., where he remained until 1928 when he entered into the employ of the Ritchie Mining Company as office manager.

In 1929 he became associated with the Armstrong Cork Company, serving successively in the capacities of accountant and cost accountant, chief cost accountant, chief accountant, and—if he has not been promoted since he left for the convention—he is now Chief Accountant and Auditor of that company. It is my pleasure to introduce to you, Mr. Green, Past President of our Reading Chapter. Mr. Green.

### SHOULD MATERIALS BE CHARGED INTO PROCESS AT ACTUAL COST OR REPLACEMENT COST?

EARL A. GREEN

Chief Accountant and Auditor, Armstrong Cork Co.,  
Lancaster, Pa.

THE valuation problem as it applies to materials charged into process is by no means a new one although undoubtedly radical changes in economic conditions in recent years have served to make the problem more acute. The subject is therefore most timely and should provide the basis for a most interesting and enlightening discussion.

While it is true that in dealing with the process accounts our problem is confined to the manufacturing or processing field, nevertheless

it seems to me the subject should prove of interest to all accountants, regardless of their particular field of endeavor.

*Question Involves Inventory Valuation*

It is well not to be deceived by the apparent simplicity of this question. To put it another way, the full importance and extent of our problem is not readily revealed in the wording of the question itself. Any basis used for pricing materials into process is reflected in the value of the materials left on inventory as well as the materials included in the work in process and finished stock inventories at the close of each accounting period. Therefore, any principle of valuation which is developed must recognize the fact that the valuation placed on the inventory affects both the balance sheet and the statement of profit and loss. Since inventories are included under the caption of current assets on the balance sheet, the valuation thereof has an important bearing on the current ratio.

However, it is not to be inferred from the foregoing that the subject has been switched to "Inventory Valuation," but rather it is to be interpreted as an effort to give full emphasis to the importance of our problem. However, I believe you will agree that the subject for discussion is so interlocked with the subject of inventory valuation, that we shall have to trespass over the line occasionally to do it full justice.

As it is my function to present the subject in introductory fashion prior to its discussion from the floor, my efforts will be confined to a review of the arguments for and against each of the two bases of valuation embodied in the question, rather than to support the use of either.

In defining actual material cost in practice there seems to be little tendency to go beyond invoice price plus transportation charges inward, all other assignable charges, such as buying, handling, storing, etc., being handled, for the sake of convenience, as an element of burden. While it is generally conceded that trade discount should be deducted from the gross billing, there seems to be some dispute among accountants as to whether purchase discount is to be deducted from invoice price or whether it is to be regarded as a financial earning and accordingly shown on the statement of profit and loss under the caption of "Other Income."

One of the most difficult problems arising in accounting for materials is that of pricing the materials issued. The ideal basis would seem to be actual cost, but because of the difficulty and often the

impossibility of determining this figure precisely under the storing methods in use, it becomes necessary to adopt some approximation of actual cost. The bases of approximating actual cost in the most general use are—

1. Weighted average cost
2. First-in, first-out method

### *Weighted Average Cost*

Where the "weighted average cost" is employed, the result of course is influenced by the number of units acquired at the various prices. One of the advantages claimed for this method is that it tends to iron out violent fluctuations in the prices of the materials charged to manufacture. The application of this method has the advantage, according to Amidon and Lang in their book, *Essentials of Cost Accounting*, of costing each issue at the inventory value at the time of issue and in placing a more uniform value on the material used for a particular order.

The use of this method is subject to the objection that in a rising or falling market, the results may be far from satisfactory. Another objection is sometimes advanced that the clerical effort involved tends to make this method impracticable and costly, since a new unit cost must be computed every time new units are purchased. However, the validity of the latter objection depends quite largely on the frequency and relative size of purchases.

The "weighted average cost" method is criticized by some on the ground that it assumes that goods are withdrawn from inventory in exact proportion to the physical amount of the various lots then composing the stock, whereas the assumption is obviously unreliable in a great many cases. The chief practical objection to the method, however, seems to lie in the fact that the Bureau of Internal Revenue has frowned upon its general use.

However, it must be remembered that what is desired is a reasonable method of approximating actual cost and the "weighted average cost" method, in a great many cases, especially where the rate of turnover is fairly high, appears to meet this requirement.

### *Cost on "First-In, First-Out" Basis*

The "recent-purchases" or "first-in, first-out" method of approximating cost is favored by the Bureau of Internal Revenue and has been widely used in recent years. This method is based on the assumption that material as withdrawn from inventory is always

taken from the oldest stock, or, in other words, the goods on hand consist of the most recently acquired lots. This results in a value for the materials inventory that approximates the current market price, particularly where the rate of turnover is high.

In using this method the procedure is to price the goods called for in the requisition at the price paid for the oldest lot on hand until that lot is exhausted, then proceed to the next oldest lot, until the requisition is filled.

The advantages of this method are very capably enumerated in the *Accountants Handbook* and may be summarized as follows:

This method of approximating invoice costs where actual cost cannot be expediently obtained can, in general, be strongly recommended. Apparently there are no serious objections to the method, either technical or otherwise and there are certain important advantages. These may be summarized as follows:

1. It is based on cost and hence raises no question of unrealized income or loss.
2. It is drawn from the actual records in a systematic manner, without the use of estimates.
3. It conforms to sound principles of economics in business in that the resulting inventory value is usually a fair representation of the current commercial values.
4. It is based upon a clear cut assumption as to the movement of goods throughout the concerns, which is good business for the management to adhere to as closely as possible.
5. It is approved by the Bureau of Internal Revenue.
6. It is a very convenient method to use in pricing out of stock under any continuous inventory system.

The accuracy of the material cost transferred to work in process depends especially upon the reasonableness and accuracy of the system employed in pricing requisitions. Where any method of approximating actual cost is employed in pricing materials as they flow from inventory into process, the cost of material charged to a particular order or job is, of course, not the exact cost of the material used on that job. However, if the method of pricing is sound, the resulting costs of work in process, on the average, will be reasonable and sufficiently accurate.

### *Objections to Use of Actual Cost*

The principal objection to the actual cost valuation of materials charged to work in process, regardless of the method used, is based on what may be termed a balance sheet consideration. If replace-

ment costs have either advanced or fallen as compared to actual cost it may be argued that the inventory on an actual cost basis does not exhibit true financial condition.

The second objection to the use of actual cost valuation is that in so far as selling prices reflect current replacement costs, the management is not properly guided by statements based on book costs.

In general neither of these objects is vital, particularly in the case of up-to-date, fast moving stock. If desired, either depreciation or decline in value can be given effect to in the balance sheet through the use of an appropriate reserve method.

### *Replacement Cost*

Replacement cost as used for the valuation of materials charged into work in process is generally defined as a present invoice price plus inward transportation charges, handling and storage costs, etc., on the basis of what these additional elements would now cost. As in the case of actual cost, however, the tendency in practice is to stop short of any serious attempt to assign operating charges other than transportation costs to the material.

The consistent use of replacement cost for the valuation of materials charged to process, in the case of those standard materials which are highly sensitive to market changes, can be argued to be more effective than original cost, from a managerial standpoint.

The consistent use of replacement cost is likewise defended from the standpoint of sound balance sheet construction. Kohler and Morrison (*Principles of Accounting*) state, "selling prices which the going concern will obtain are influenced by the cost of replacing the material rather than by the cost of the goods which happened to be on hand." It is further claimed that in manufacturing much more than in trading, it is to be expected that changing replacement costs of materials will be reflected in changing selling prices of products.

A very interesting article "Inventory Valuation and Profits," written by V. L. Elliot, a member of our Philadelphia Chapter and reprinted in the March issue of the *Accountants Digest*, seems to bear out the foregoing contention, in the oil industry at least. In this case the Uniform Accounting Committee of the American Petroleum Institute, after two years of study and discussion, recommended the "last-in, first-out" method of valuation, in the belief that since, in the petroleum industry, oil product prices generally follow crude oil prices, this plan of charging current costs against current

sales is the proper one in either normal times or in a depression and should result in more stable earnings being reported by each company in the industry using it.

However, Howard S. Thompson in his article, "Oil Inventories Accounting," reprinted in the same issue of the *Accountants Digest*, disagrees with the plan adopted by the American Petroleum Institute stating:

For some years I have favored the "average" method of accounting for the flow of commodities and their inventories, as I am convinced that better results are currently obtained under this method and that more satisfactory comparisons can be made as between periods. There are many situations in which neither the "first-in, first-out" nor the "last-in, first-out" rule can be applied for various reasons, and even where it is possible to use one or the other of them I think that they are much less desirable than the "average" method, on account of the defects in the reasoning upon which they are based.

### *Objections to Replacement Cost*

While the consistent use of replacement cost is of distinct advantage in a period of falling prices, in which case it meets with the requirements of the Bureau of Internal Revenue for income tax purposes, in a period of advancing prices it tends to result in the inclusion in the operating statement, of profits not realized by sales and this of course is contrary to one of the most strongly entrenched theories of balance sheet construction, namely, no profits may be anticipated and all losses must be provided for.

Aside from the general theoretical considerations, there are several more practical objections to replacement cost as a basis for valuation of materials charged to process, such as:

1. It is not approved for income tax purposes by the Bureau of Internal Revenue.
2. It requires continuous determination of replacement costs for each item of material on inventory and therefore involves considerable additional clerical effort in some industries.
3. It is generally regarded as being non-conservative by accountants, bankers, and business men.
4. It leaves the field of book records for a territory where estimates play a considerable part.
5. Where it means the inclusion of appreciation in income it has no legal status.

It is evident from the foregoing that each basis of valuation has its advantages and disadvantages. However, as stated previously, no attempt is made in this introductory presentation to support either one, it being the opinion that greater benefit will result if we are to develop an opinion through discussion from the floor.

CHAIRMAN PACKARD: Thank you, Mr. Green.  
All right, let's have it!

MR. SHARP: I would like to have the speaker's opinion on this way of handling inventories:

On January 1 you take an inventory, and you value it at cost or market—whichever is lower. During the year you issue goods on an average price. Experience has shown me that that does three things: In the first place, it does away with violent fluctuations if you have stock at the beginning of the year which has not been added to during the year—you are on a cost price, naturally—and at the end of the year when you take your inventory again you value it in cost or market, whichever is lower, and that meets the government regulations.

In my opinion that method of handling inventories does away with very violent fluctuations even in a time of rising prices, but I would like your opinion.

MR. GREEN: I agree with you that in a period of rising prices, the use of the average cost method does appear to meet the requirements of the Internal Revenue Department in regard to the valuation of inventory. However, since we are required by income tax regulations to revalue the inventory at the end of the accounting period at the lower of cost or market, in a period of falling prices, especially where material is contracted for on a three, six, or nine month basis, if we have made no provisions for market fluctuations in the form of a current contingency allowance or reserve, the profit picture which we have built up in our minds throughout the year is due for a rude shock, due to the loss incurred through writing the inventory down from cost to market in this case.

In my own company we set up a contingency reserve throughout the year to allow for the market fluctuation. Naturally this is an approximation and is by no means one hundred per cent correct, but it has served very satisfactorily to minimize the loss due to inventory write-downs at the end of the year and it certainly has eliminated the headaches that so often go along with this situation.

GEORGE P. ELLIS (*Partner, Wolf & Co., Chicago, Ill.*): It seems to me that for the past two days, starting especially yesterday afternoon, we have been trying to introduce accounting tax expediency for real accounting principles. I say it is high time for the accounting profession to decide on the basis of principles what should be done, rather than to let the Bureau of Internal Revenue and everybody else tell us how we should keep our books.

I do not care what the Bureau of Internal Revenue says from the standpoint of accounting. I may have to adjust my books to meet the requirements of the income tax laws and regulations, but I do not have to keep my books on that basis.

What is the purpose of accounting? It is really to get the control of the business, and if you are the management, it provides facts on which you can base managerial programs. We talked of the fixed inventory yesterday afternoon, about the direct cost, and now about this matter of how we shall charge the material into cost.

I submit to you that it is just as much a managerial problem to determine the efficiency of the purchasing department of our business as it is to determine the efficiency of labor or any other phase of the business, and therefore, in so far as possible, we should get the actual cost of that material into our costs for balance sheet purposes. Where we have to get a value as at a certain date, it is necessary perhaps to adjust our value for that purpose, but from a cost accounting standpoint the profit we make is the difference between what that material cost us and what we get for it.

Now on special orders oftentimes we will take and absolutely mark the material for that order when it comes in and charge it into the job on the basis of what that material cost.

Now, where we cannot do that, then we should get that material in, in so far as we possibly can, and as nearly correctly as we can, at what it actually cost us. But to take an arbitrary figure purely for purposes of expediency, or for the purpose of reducing taxes, I say is getting away from the standards and the ethics and the intelligence that the accounting profession ought to stand for, and I am utterly opposed to this idea of expediency which we have built up in the accountancy profession—just a lot of procedure and convention.

I say it is high time for us to get down and set some definite principles and stand on them, regardless of what other people say about them.

MR. GREEN: Check!

CHAIRMAN PACKARD: Thank you for a very clear-cut statement. I am sure that we are all in agreement. If there are any who are not in agreement we would be pleased to hear from them at this time.

If there are no other questions, I am going to turn the meeting back to Mr. Fletcher, our President-Elect. But before doing so, I would like to express my appreciation of the very careful attention given to all of the speakers during today's session. It has been very helpful and greatly appreciated.

PRESIDENT-ELECT FLETCHER: On behalf of President Lohnes, who was obliged to leave last evening, it is my duty and also a great regret to call this convention to a close. Before doing so I think that we should express our gratitude to the members of the Program Committee for the splendid program they so carefully prepared, and for these excellent papers which will make a real contribution to our annual Year Book. I want to ask Mr. Reuwer and Mr. Packard to stand, and regret that Mr. Walsh and Mr. Monroe are not here to join them in receiving our thanks and congratulations. I am sorry not to see Mr. Haefner but perhaps we can express our appreciation to him and to all the members of the Cincinnati Chapter who have worked so splendidly with him to make this convention an outstanding success.

Next year our convention is to be held at Hot Springs, Virginia. We are going to a resort hotel, which has every facility for our requirements and comfort, and I hope that everybody at this convention is planning to be there and will bring every member of his chapter who can possibly come.

The meeting, gentlemen, is adjourned.

. . . The meeting adjourned at four-twenty o'clock. . .







